biosim™ App: Android

Quick Reference Guide for i-limb devices

touch bionics

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Welcome and Important Points

Welcome to the mobile world of Touch Bionics! The biosim™ mobile application will enable you to quickly and easily access and change features on i-limb devices.

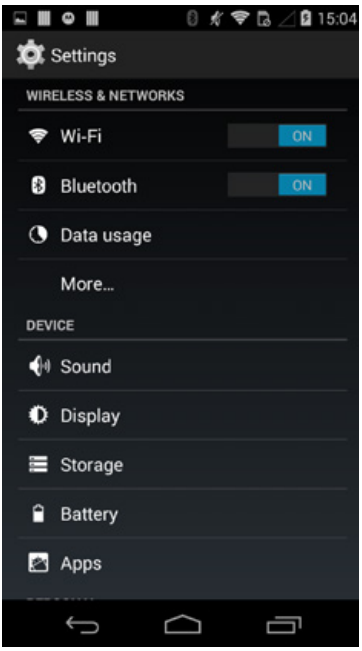
Important points to note:

- The biosim app must be downloaded from the Android Play Store.
- A Wi-Fi or cellular connection is needed to download the app, receive updates, or run hand health check.
- Your Android device connects to an i-limb via a Bluetooth® connection, which is automatically established when you start the biosim app.
- The biosim mobile app is compatible with the following devices: Samsung Galaxy S5, Google Nexus 5, Motorola X.
- Minimum version of android required is 4.3 (jelly bean).
- To exit the application at any time, simply press the main “Home” button on your Android device.

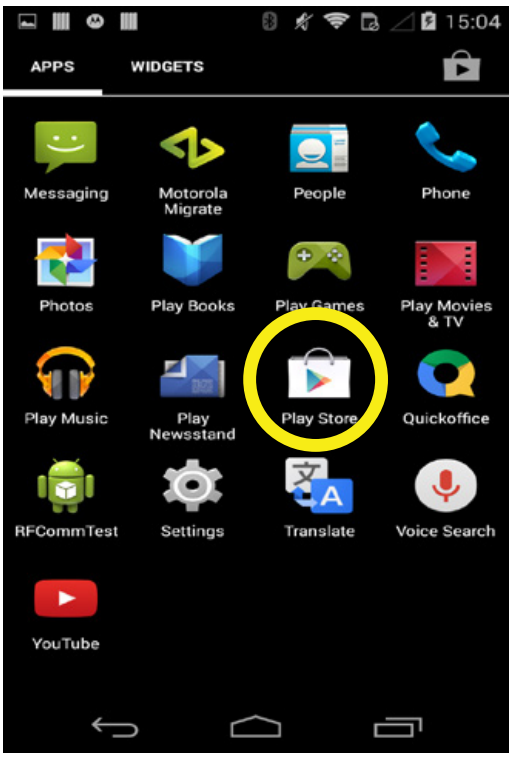
Getting started

For general instructions on using your Android device, read your devices user manual provided by Android.

The first time you use your device, you will need to be connected to the Internet via cellular or Wi-Fi connection. You can connect to a Wi-Fi network by tapping on the “Settings” icon on the first screen.



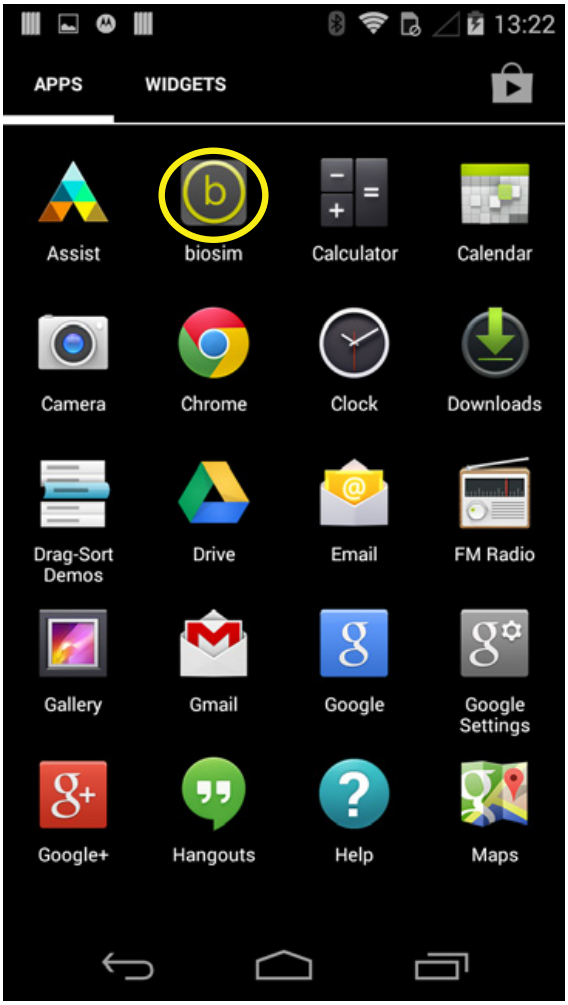
Next, go to the Android Play Store via the icon. To search for the biosim app, type “Touch Bionics” or “biosim” in the search tab and download the app to your Android device. Note: a Google ID will be required to download the app. If you do not have one, please create an account by logging on to the Google website.



Clinicians may also download “my i-limb”, which is the patient version of the biosim app. Use the term “my i-limb” when searching the Google Play Store.

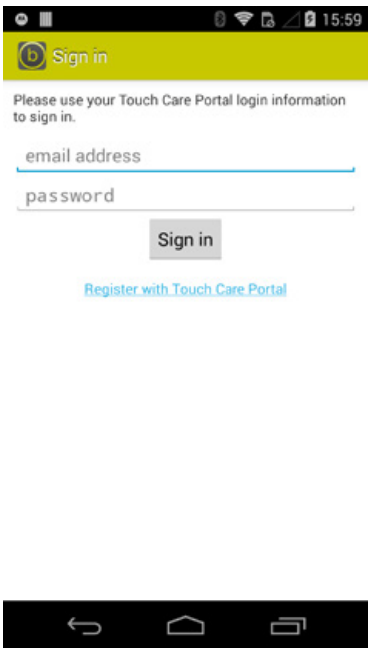
Note: Search for "biosim" and "my i-limb" in the Google Play Store.

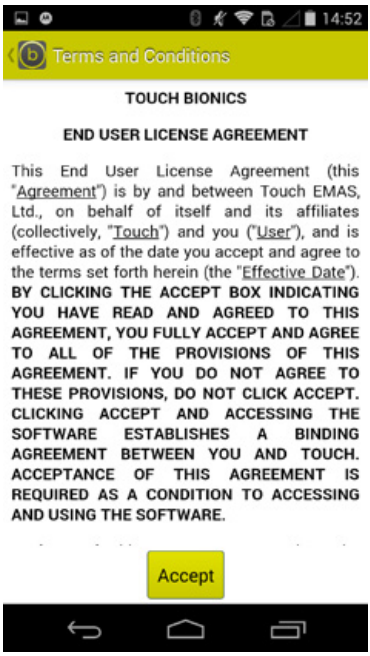
Upon downloading the biosim mobile app, an icon will appear on your mobile device‘s screen. Tap on it to start the app.



Activation

The first time you connect to biosim, you will see the “Sign in” screen. Here you will need to enter the email address and password that you use when you log-in on the Patient Care Pathway on Touch Bionics’ web site. If you need to create an account, you may also do so by selecting “Register” on the screen below. You will need to activate your account by confirming the email sent to the email account you provided prior to being able to connect.

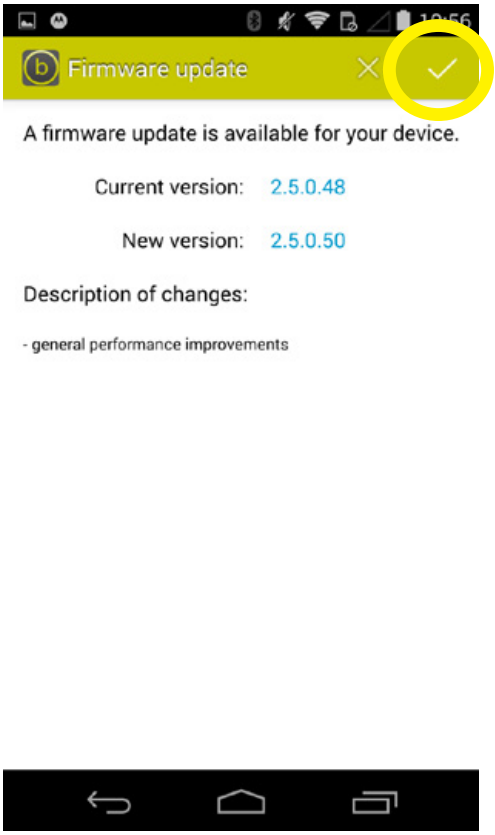



14:52
Terms and Conditions
TOUCH BIONICS
END USER LICENSE AGREEMENT
This End User License Agreement (this "Agreement") is by and between Touch EMAS, Ltd., on behalf of itself and its affiliates (collectively, "Touch") and you ("User"), and is effective as of the date you accept and agree to the terms set forth herein (the "Effective Date"). BY CLICKING THE ACCEPT BOX INDICATING YOU HAVE READ AND AGREED TO THIS AGREEMENT, YOU FULLY ACCEPT AND AGREE TO ALL OF THE PROVISIONS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THESE PROVISIONS, DO NOT CLICK ACCEPT. CLICKING ACCEPT AND ACCESSING THE SOFTWARE ESTABLISHES A BINDING AGREEMENT BETWEEN YOU AND TOUCH. ACCEPTANCE OF THIS AGREEMENT IS REQUIRED AS A CONDITION TO ACCESSING AND USING THE SOFTWARE.
Accept

Upon registering, please review the Terms and Conditions. Tap "Accept" to continue.

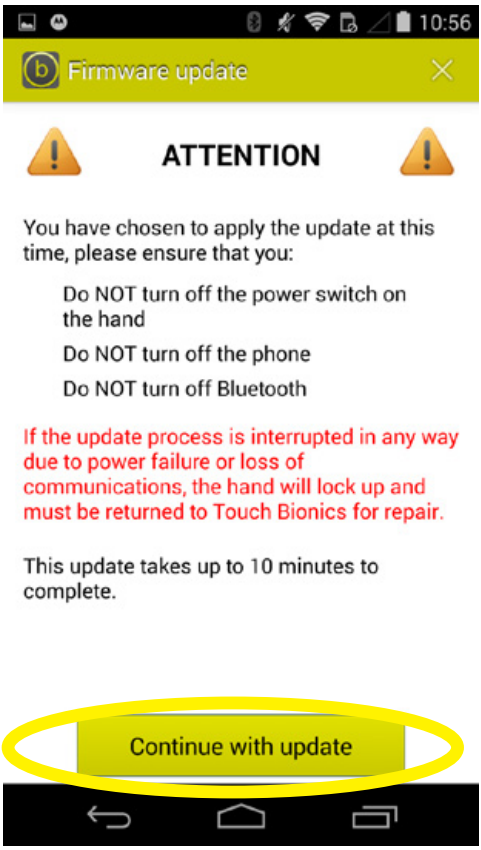
Firmware Update

Touch Bionics always recommends that you download the latest firmware for your device. If a firmware update is available, you will be prompted with the following screen upon connection to biosim.



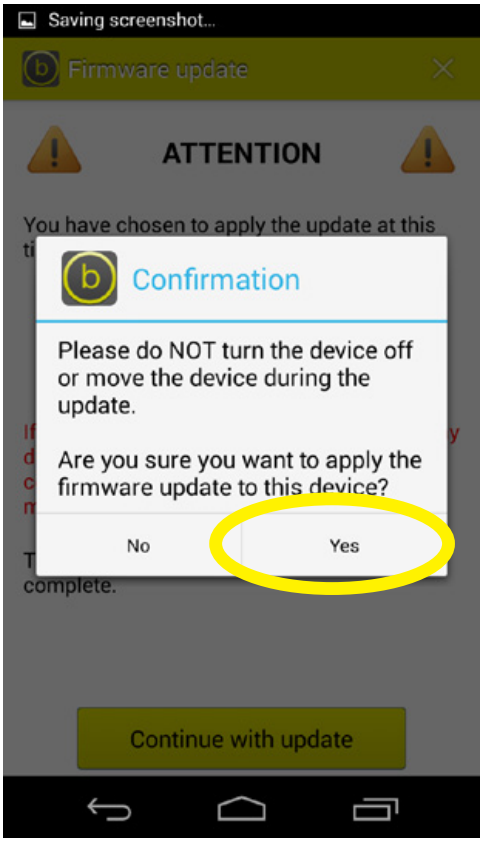
Tap "Apply” to initiate the update. Tapping "Cancel” will dismiss this screen.

Tapping "Apply" will bring you to the app update warning screen. Ensure you read and comply with all warnings. Tap "Continue with update" to proceed.

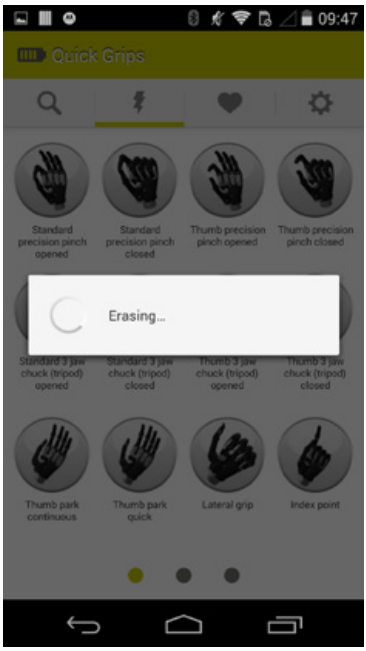

10:56
Firmware update
ATTENTION
You have chosen to apply the update at this time, please ensure that you:
Do NOT turn off the power switch on the hand
Do NOT turn off the phone
Do NOT turn off Bluetooth
If the update process is interrupted in any way due to power failure or loss of communications, the hand will lock up and must be returned to Touch Bionics for repair.
This update takes up to 10 minutes to complete.
Continue with update

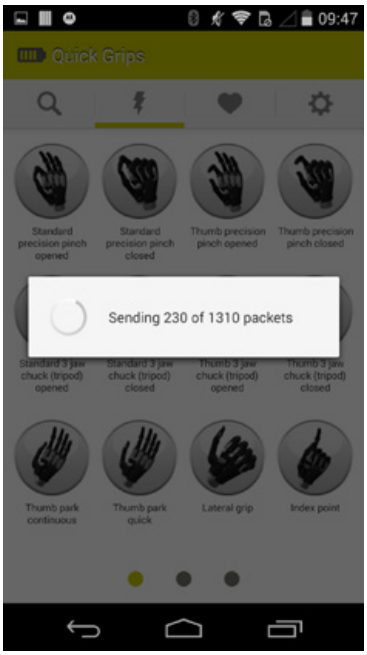
Note: Ensure that you are able to perform the update without interruption. Loss of power or hand communication could result in your device locking, which will require service by Touch Bionics. Total update time may take up to 10 minutes.

After tapping "Continue with update" you will arrive at a final confirmation screen. Tap "Yes" to continue.

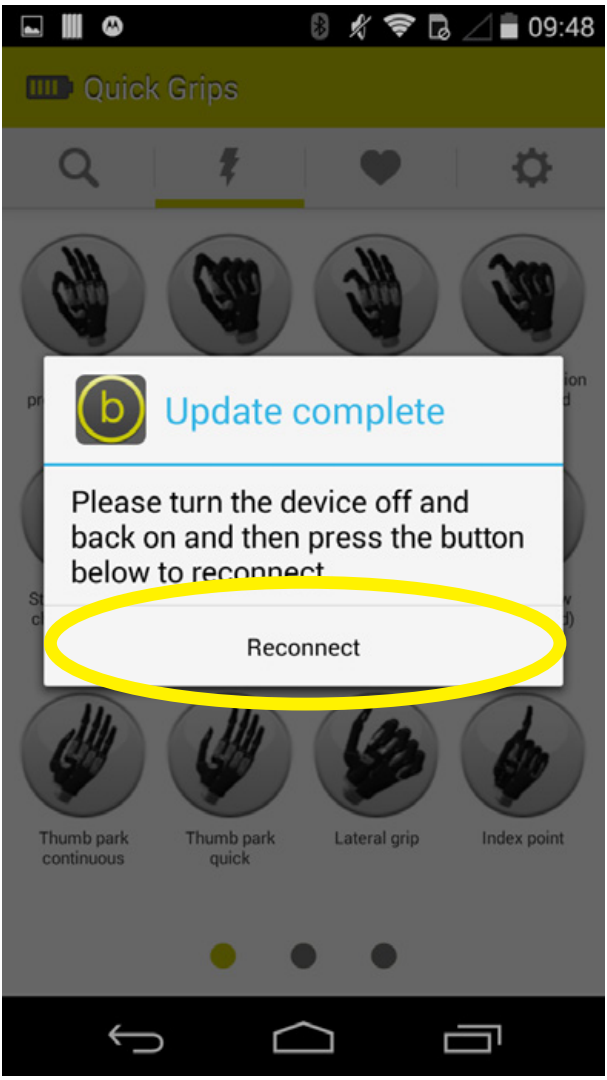

Saving screenshot...
Firmware update
ATTENTION
You have chosen to apply the update at this
Confirmation
Please do NOT turn the device off or move the device during the update.
Are you sure you want to apply the firmware update to this device?
No
Yes
complete.
Continue with update

After tapping "Yes" the update will begin. You will see a variety of screens as the update progresses. Update screens may vary depending on device updated.





At the conclusion of the update you will be prompted to turn your device off and back on again to complete the update.



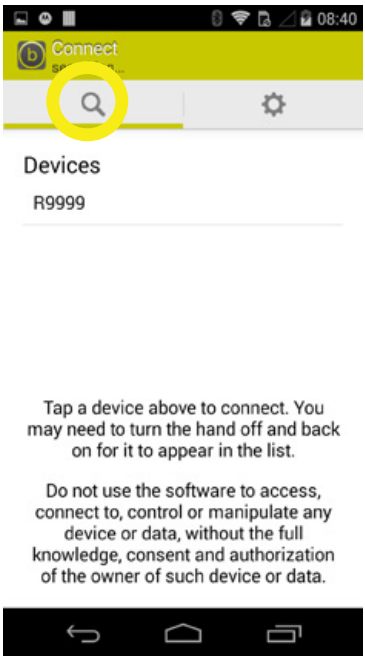
After powering off and on, tap "Reconnect" to continue using the biosim app.

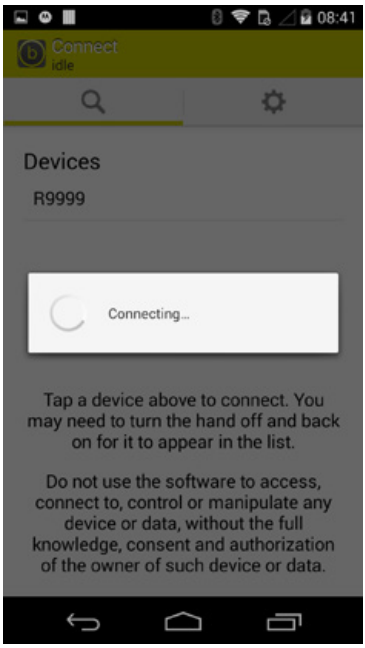
biosim™ App: Android i-limb™ ultra revolution

touch bionics

Connection

After signing in, you will be brought to the connection screen where you will tap your device to connect.


08:40
Connect
Devices
R9999
Tap a device above to connect. You may need to turn the hand off and back on for it to appear in the list.
Do not use the software to access, connect to, control or manipulate any device or data, without the full knowledge, consent and authorization of the owner of such device or data.


08:41
Connect
idle
Devices
R9999
Connecting...
Tap a device above to connect. You may need to turn the hand off and back on for it to appear in the list.
Do not use the software to access, connect to, control or manipulate any device or data, without the full knowledge, consent and authorization of the owner of such device or data.

Searching for another device

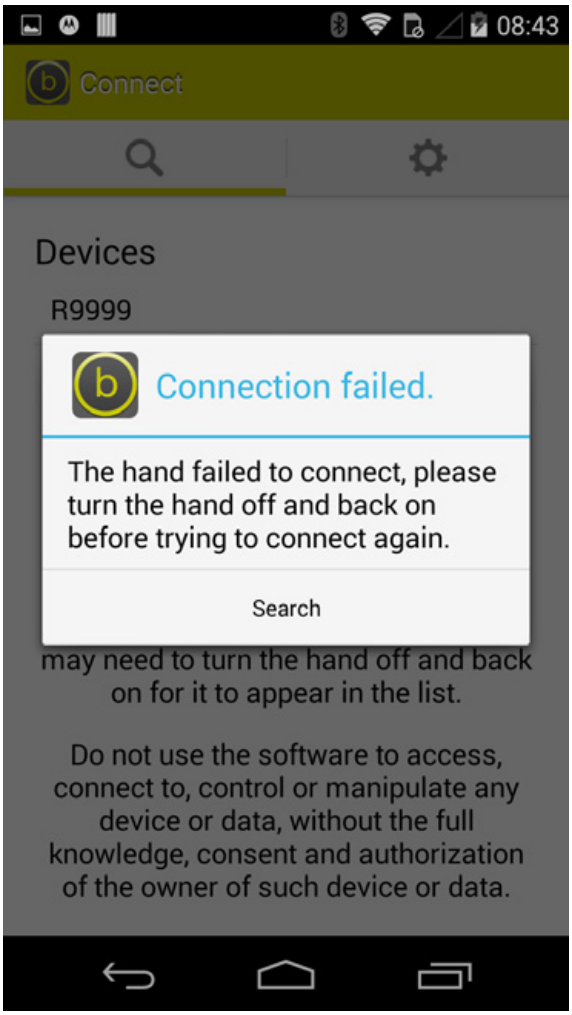
If you need to connect to a different device, simply tap the magnifying glass in the top left corner of the app and it will search for any devices in the area.

Authorized User Access

In order for you to connect to a patient's device, they will need to tell you their 4 digit serial number located proximal to the base of the thumb on the connection plate. If the patient has a flexion wrist, the serial number will appear at the base of the thumb. You will be prompted to enter this after selecting the patient's device.

Connection failed

If the hand should fail to connect to the app due to loss of power, proximity with the Android device, or other reasons, the following screen will appear:


08:43
Connect
Devices
R9999
Connection failed.
The hand failed to connect, please turn the hand off and back on before trying to connect again.
Search
may need to turn the hand off and back on for it to appear in the list.
Do not use the software to access, connect to, control or manipulate any device or data, without the full knowledge, consent and authorization of the owner of such device or data.

In this instance, turn off the i-limb ultra revolution for 4 seconds, then turn back on. Tap the “Search” button to reconnect.

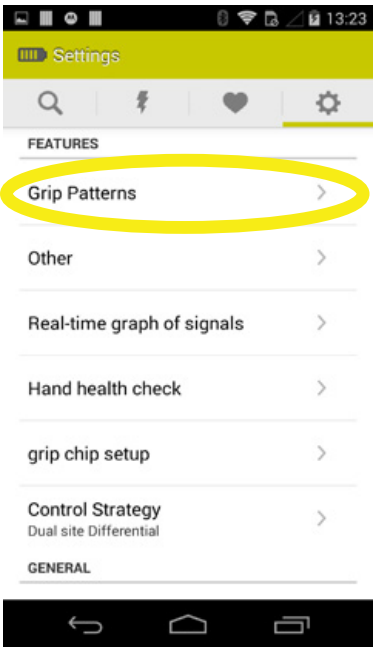
Quick grips™ and my grips screen

After connecting to biosim you will see the “Quick Grips” and “my grips” screens. Here you get instant access to 24 quick grip patterns and 12 custom my grips with a single tap. Tapping a grip icon immediately puts the device into that mode.

Note: To exit that grip, simply tap the same icon to return to the full hand mode or use one of your programmed triggers.

my grips configuration

my grips allows you to configure up to 12 additional custom grips and can be used with any trigger or grip chips.



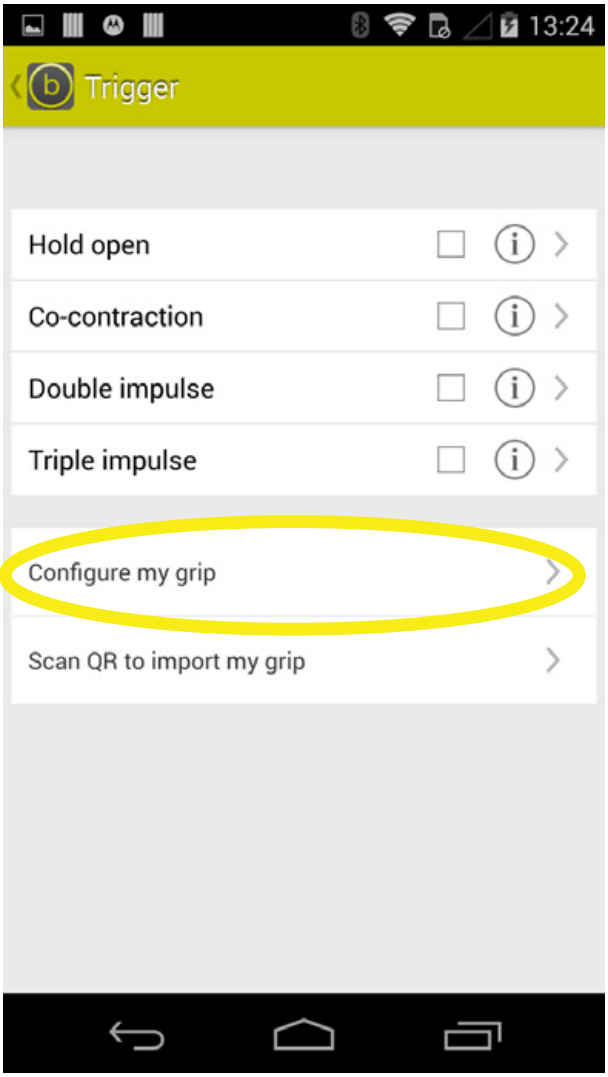
To configure my grips, tap the settings icon after connecting to the biosim app.

Once on the settings screen tap “Features – Grip patterns” to access the full set of standard grips & my grips available for selection.

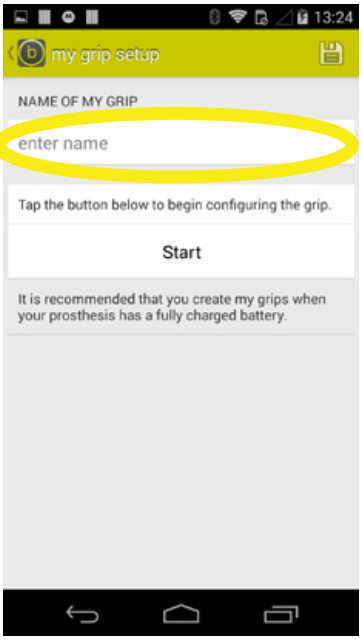
All unassigned my grips will have no name specified until one is assigned by the user

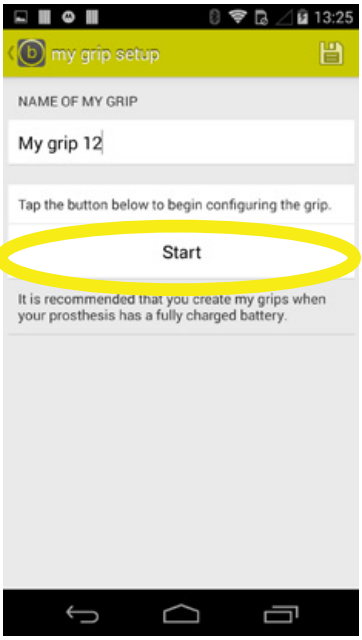
Tap one of the blank my grip options to begin creating a custom my grip.

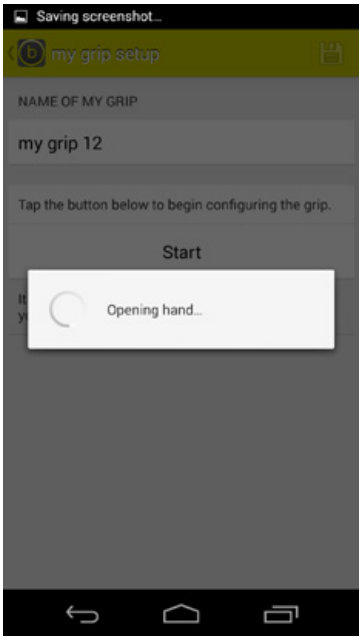
Tapping on the desired my grip will bring up the my grip configuration page that allows you to configure a my grip and assign a desired trigger. Tap “Configure my grip” to continue.



Next you will be able to assign a name to a my grip. Tapping the “enter name” field will allow you to customize the name of your my grip.


13:24
my grip setup
NAME OF MY GRIP
enter name
Tap the button below to begin configuring the grip.
Start
It is recommended that you create my grips when your prosthesis has a fully charged battery.

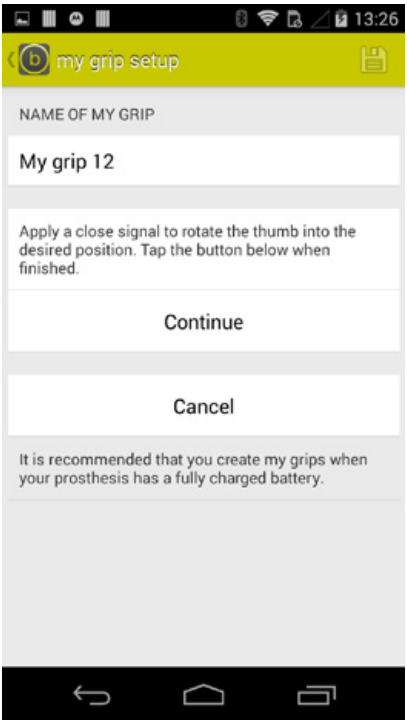

13:25
my grip setup
NAME OF MY GRIP
My grip 12
Tap the button below to begin configuring the grip.
Start
It is recommended that you create my grips when your prosthesis has a fully charged battery.

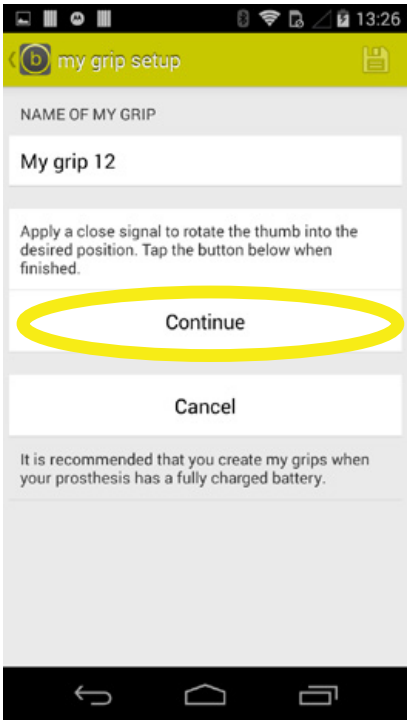


After creating a name, tap the start button to begin the my grip configuration process. This will fully open the hand.

Note: It is recommended that users configure my grips when the prosthesis has a fully charged battery.

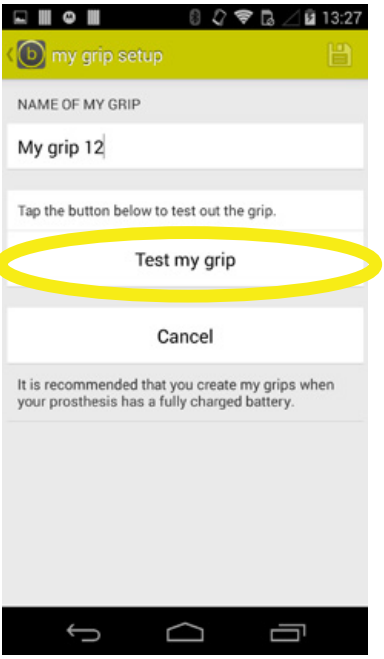
Next, apply a close signal to rotate the thumb to a desired position as noted. Tap “Continue” when finished.

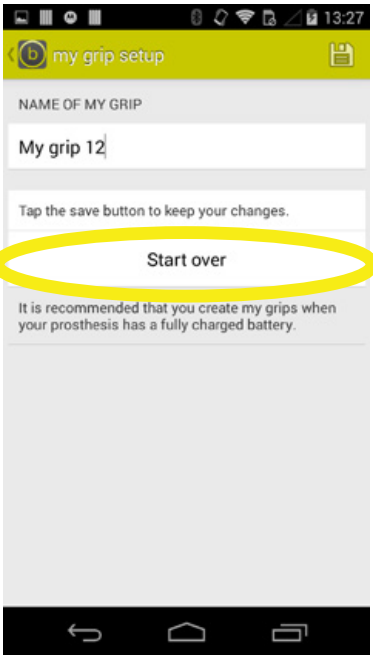

13:26
my grip setup
NAME OF MY GRIP
My grip 12
Apply a close signal to rotate the thumb into the desired position. Tap the button below when finished.
Continue
Cancel
It is recommended that you create my grips when your prosthesis has a fully charged battery.

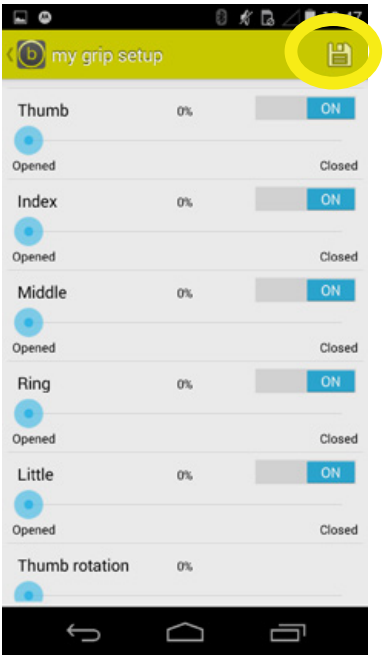

13:26
my grip setup
NAME OF MY GRIP
My grip 12
Apply a close signal to rotate the thumb into the desired position. Tap the button below when finished.
Continue
Cancel
It is recommended that you create my grips when your prosthesis has a fully charged battery.

Now apply a close signal to flex the fingers into the desired position as noted. Tap “Continue” when finished.

Tap the “Test my grip” button to test the grip. To change the configuration of your my grip, tap the “Start Over” button.


13:27
my grip setup
NAME OF MY GRIP
My grip 12
Tap the button below to test out the grip.
Test my grip
Cancel
It is recommended that you create my grips when your prosthesis has a fully charged battery.


13:27
my grip setup
NAME OF MY GRIP
My grip 12
Tap the save button to keep your changes.
Start over
It is recommended that you create my grips when your prosthesis has a fully charged battery.



You may also use the digit sliders to fine-tune your my grip. Please note that digit sliders will not appear after initial configuration. You will have to exit your my-grip and access again to fine-tune using digits sliders.

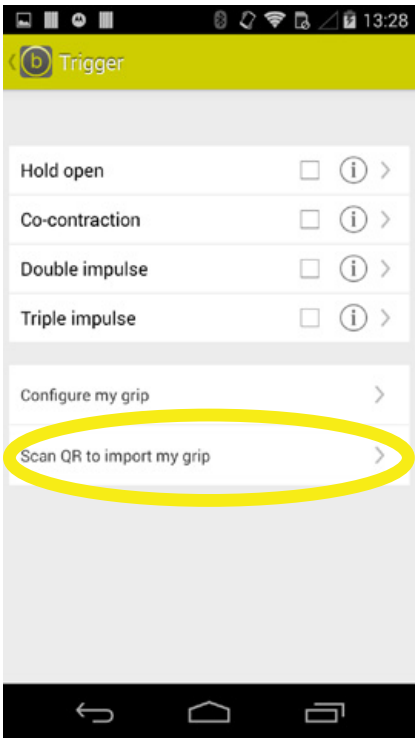
To save the my grip configuration, tap “Save.”

Configuring my grips using QR codes

Users are able to instantly program a custom pre-configured my grip by scanning quick response (QR) codes provided by Touch Bionics.

Further information and a free QR code library can be accessed online at www.touchbionics.com/qrcodes.

When ready to download and program a **my grip**, tap an unassigned my grip to access the “Trigger” menu.

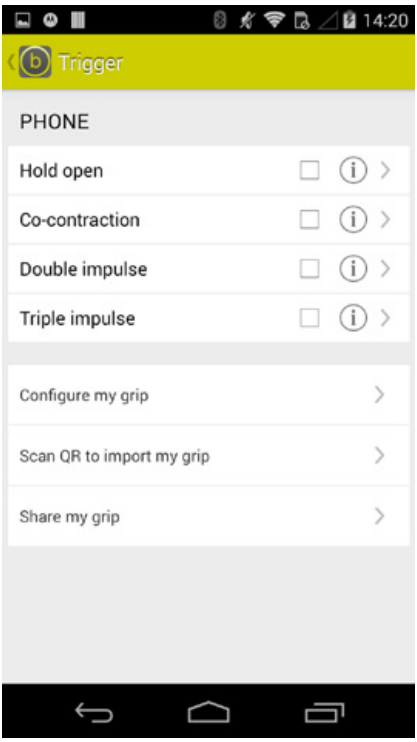


Once on the “Trigger” menu, tap the “Scan QR to import **my grip”** option.

After tapping “Scan QR to import my grip” the camera function will be activated.

Note: if you have a cover on your mobile device ensure it is not covering the camera lens.

Point your mobile device camera at the desired QR code.



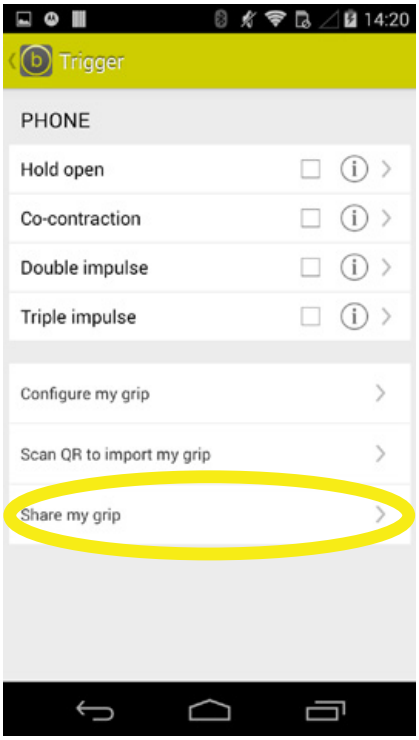
Once the QR code is scanned successfully, you will be brought back to the “Trigger” menu. From here you can further customize any **my grip** as preferred.

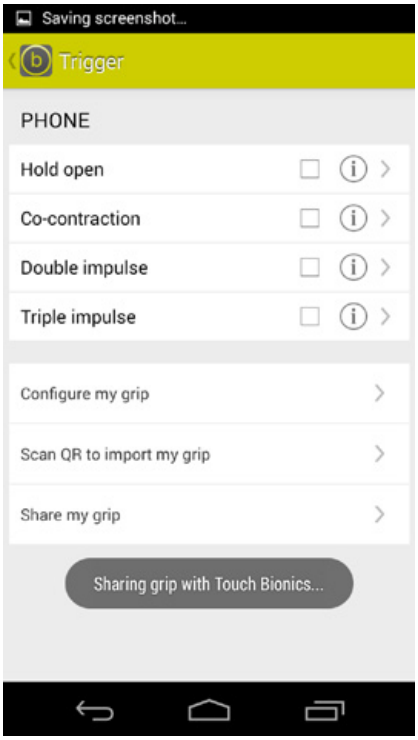
Sharing my grips with Touch Bionics

Users may share custom **my grips** to be considered for inclusion in Touch Bionics‘ QR code library.

To share your **my grip** with Touch Bionics, tap a **my grip** to access the “Trigger” menu.

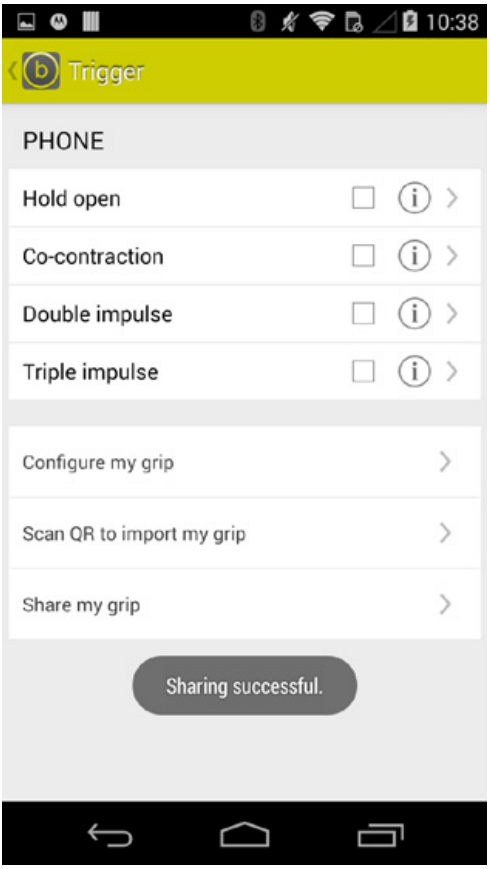
Next, tap “Share my grip”. The custom **my grip** will be transmitted to Touch Bionics’ app cloud.





Note: Internet connection is needed to share **my grips**.

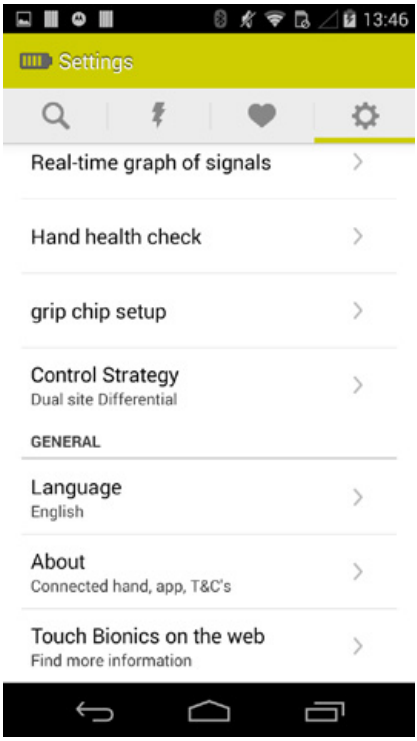
Once complete a message will appear confirming that the **my grip** was successfully shared with Touch Bionics.



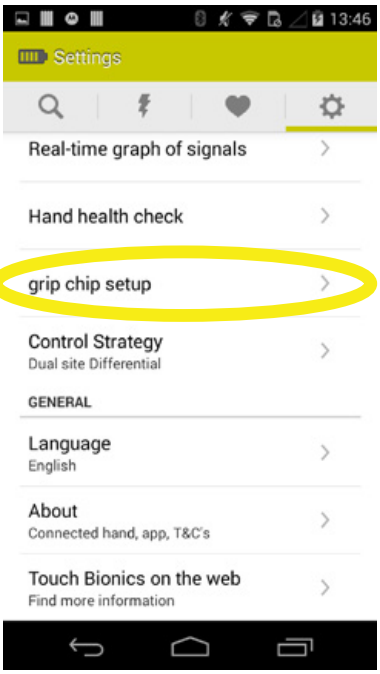
grip chip setup

For first time use, you will need to physically tap the grip chip on a hard surface to activate it. You will hear an audible alert when activated successfully.

Upon connection to the biosim or my i-limb apps, tap the settings icon.



On the settings page, tap “grip chip setup” to program a grip chip.

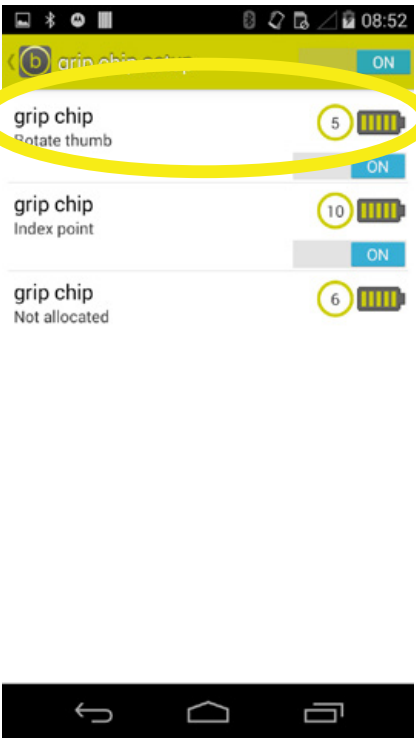


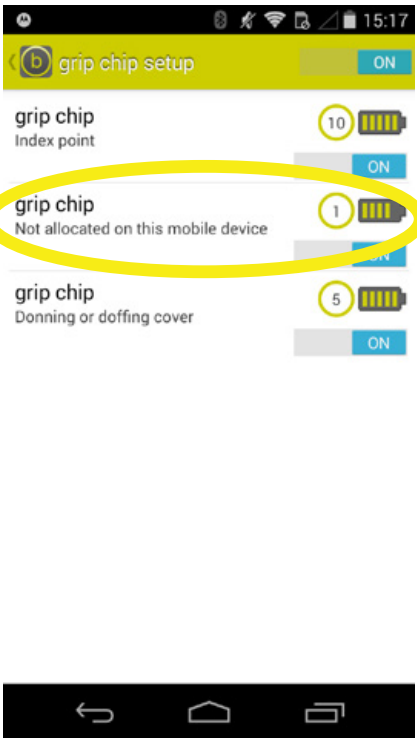
10:24
grip chip setup
Please contact Touch Bionics Customer Service to enable grip chip support.
If you do not have grip chips, please contact your prosthetist to purchase them.

09:52
grip chip setup
Tap the grip chip sharply to wake it.
If you do not have grip chips, please contact your prosthetist to purchase them.

You will be prompted to contact Touch Bionics if you do not currently have grip chip capability. For grip chip compatible devices, you will be prompted to awaken the grip chip by tapping sharply.

Active grip chips will be displayed on the grip chip setup page along with their grip chip number and battery level. Tap the desired grip chip to which you want to connect.



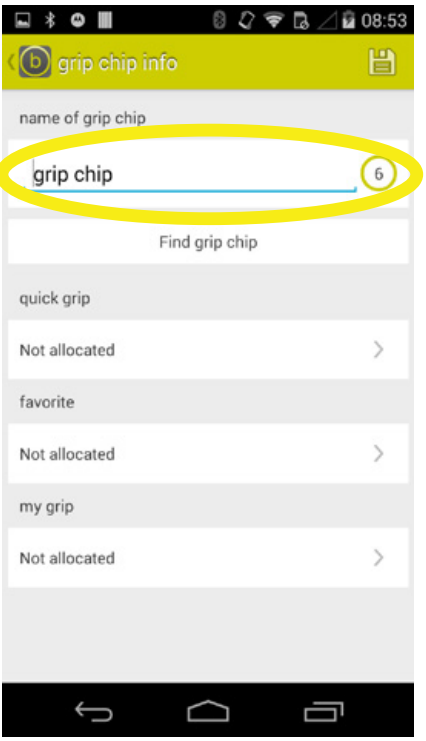


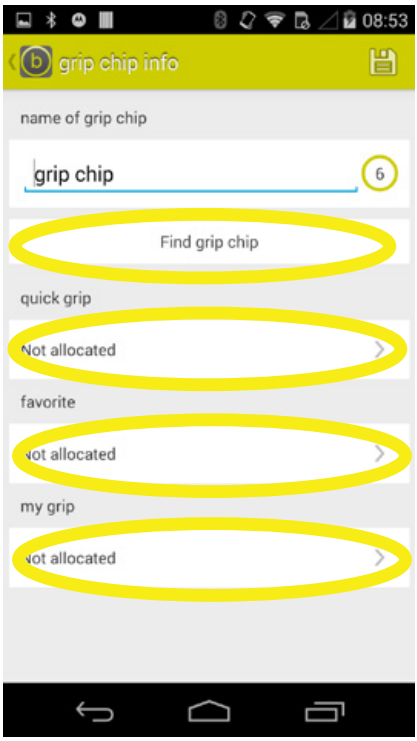
Note: You will see “Not allocated on this device” if you attempt to connect to a grip chip that has been previously programed with a favorite using a different Android device than the one you are currently using. In this case, you can still re-configure the chip, but will not see how it was previously configured.

The grip chip will then connect.

Once connected successfully, the following screen will appear.

To rename the grip chip, tap the “name of grip chip” field.

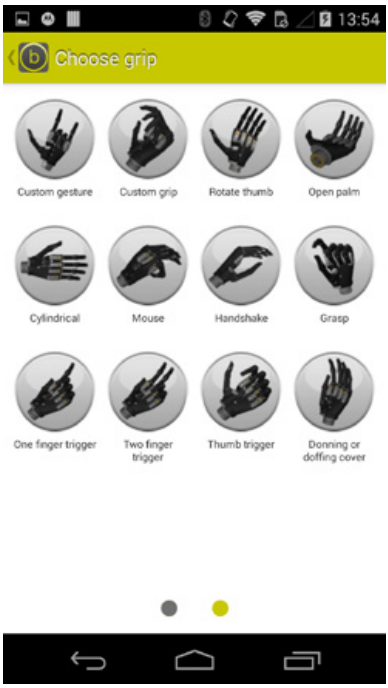


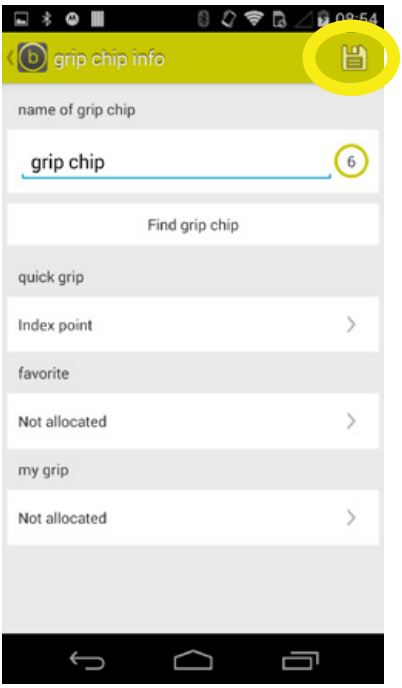


Tapping “Find grip chip” will cause the selected grip chip to illuminate and make a sound. This allows easy confirmation of which grip chip is connected.

Tap on one of the options to assign quick grip, favorite or my grip to a grip chip.

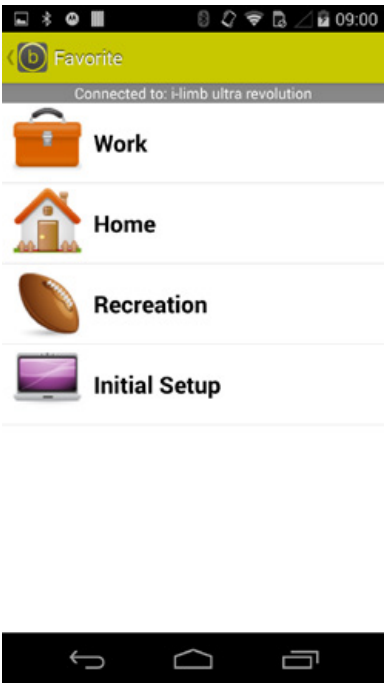
Selecting “Quick grip” will allow you to select a quick grip option to assign to the grip chip.

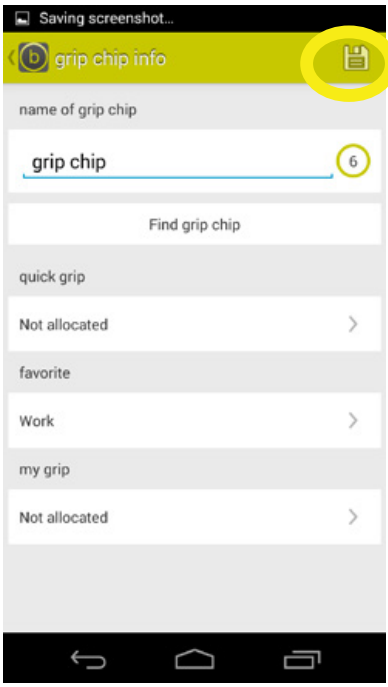




After selecting a quick grip to assign, tap “Save” when arriving back to the “grip chip info” screen. The grip chip is now shown with its name, assignment, number and battery level.

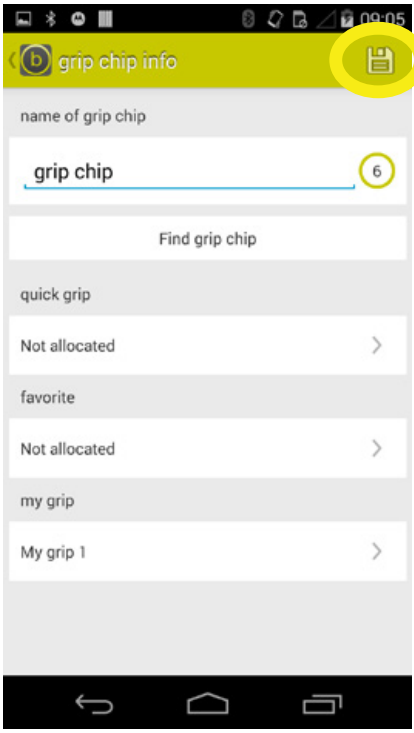
Selecting “Favorite” will allow you to select a saved favorite option to the designated grip chip.





After selecting a favorite to assign, tap “Save” when arriving back to the “grip chip info” screen. The grip chip is now shown with its name, assignment, number and battery level.

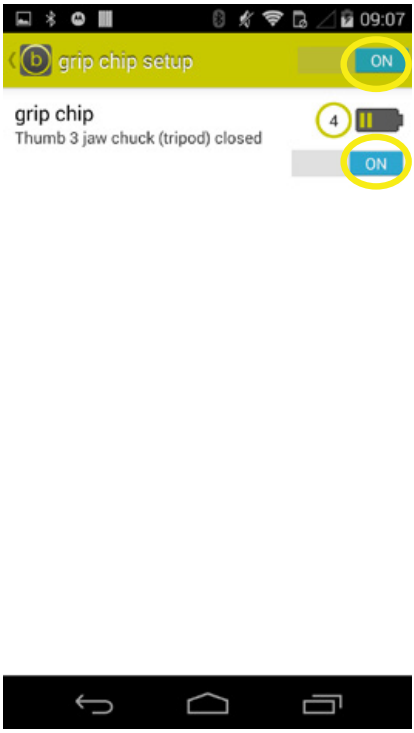
Selecting “my grip” will allow you to select a my grip option to assign to the grip chip.

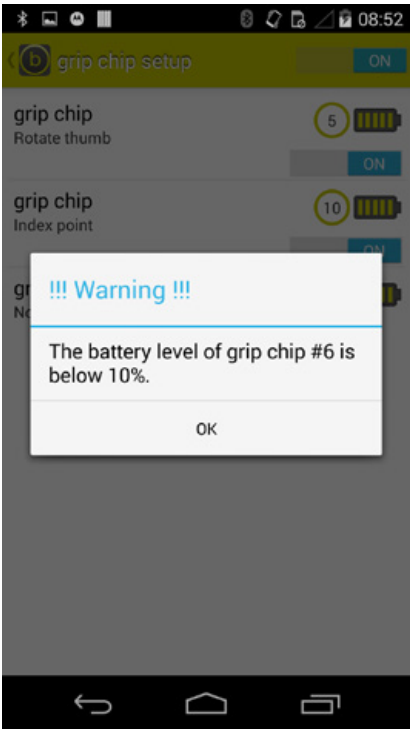


After selecting a my grip to assign, tap “Save” when arriving back to the “grip chip info” screen. The grip chip is now shown with its name, assignment, number and battery level.

You can reassign a grip or favorite and rename the grip chip if desired at any time by repeating this same process.

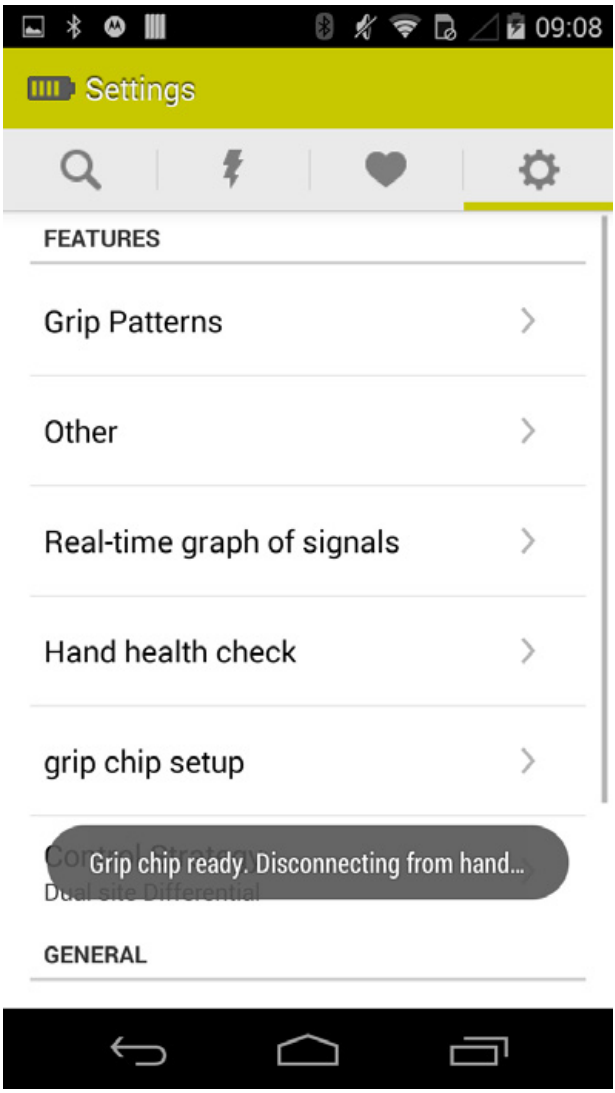
You also have the ability to deactivate a single grip chip or all grip chips. Upon accessing the grip chip setup, a toggle switch will appear on the top menu bar which allows you to enable/disable all grip chips. A toggle switch will also appear next to each individual grip chip allowing you to enable/ disable it. Disabling a grip chip will not erase any pre-programmed settings.





Note: “Low battery warning” will appear any time the app is running and a chip within range is at or below 10% on battery. Please change the battery according to instructions provided.

You must disconnect from the hand prior to using grip chips. Upon successful programming of grip chips you will be prompted to disconnect. Select “yes” to disconnect and save changes. Select “no” to configure additional grip chips. You will be prompted to disconnect after configuring each chip.



Helpful Tips:

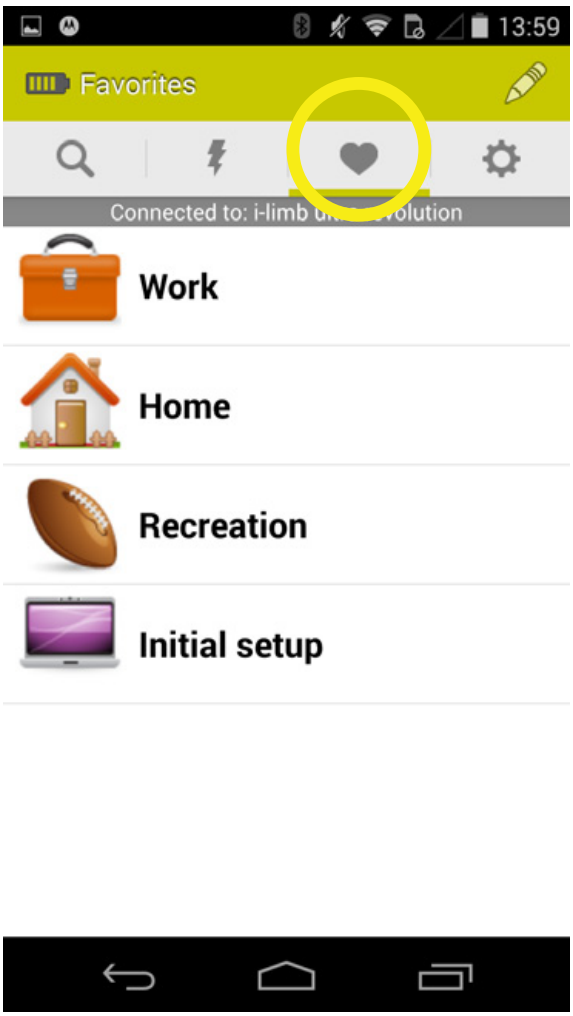
- When powering on hand, please wait 5 seconds before connecting to biosim.
- Programing must be completed within 10 seconds or grip chip will return to sleep mode. If grip chip returns to sleep mode, tap it once again to “wake up” and proceed with programming. Once programed, sleep mode is disabled.
- Once programmed the grip chip will remain on until the battery life runs out.
- You must naturally approach the grip chip and hold the i-limb ultra revolution within 6 (15cm) inches from the grip chip. The hand must be in the full open position to detect the grip chip. It is important to remember that a natural movement is critical to quick and proper grip chip detection. Running to a chip or hastily placing your hand near it may result in a connection delay.
- Only hold open for grip chip detection when you are within 6 inches (15cm) of grip chip.

Helpful Tips:

- Each grip chip should remain at least 24 inches (61cm) apart from one another.
- Do not press the home button while hand is in process of connecting to the app. Doing so will inhibit hands ability to detect grip chips. If you press home button during this process, cycle power to the hand or attempt to full reconnect, and then disconnect from the app to reset connection.

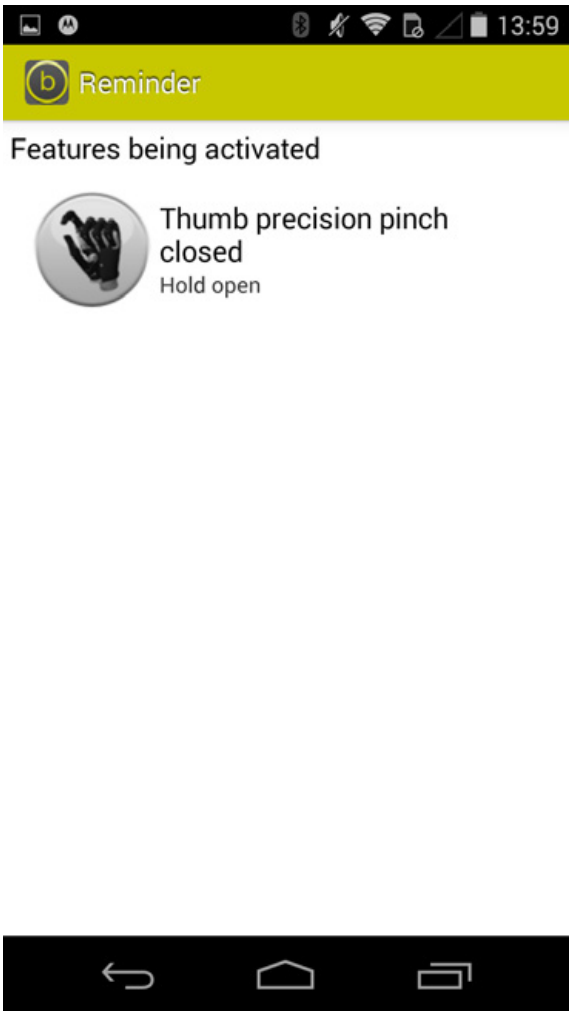
Favorites screen

Here you can assign groups of grip patterns and triggers a single name to make them easily accessible with a single tap.



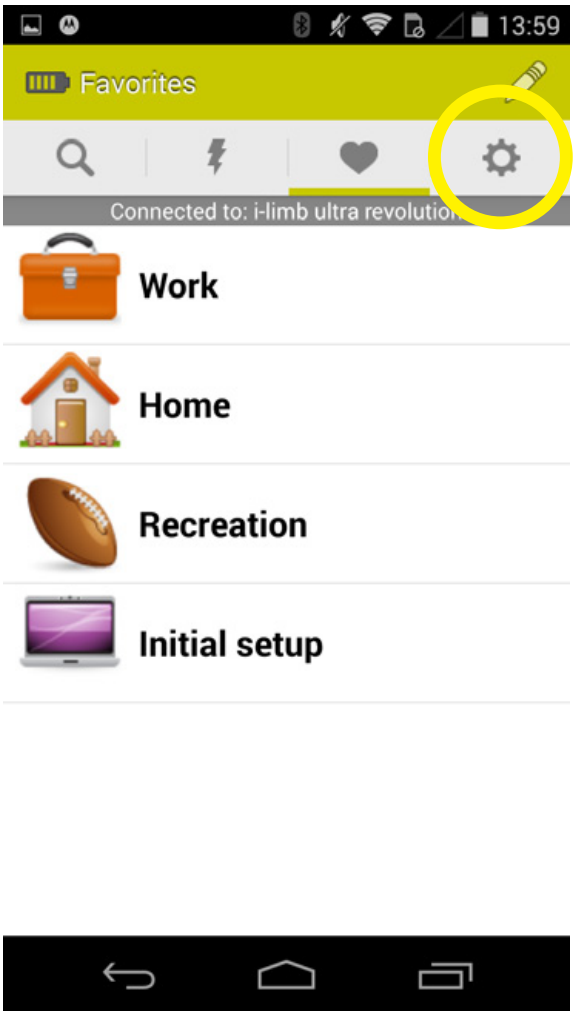
Note: To access the “Favorites” screen at any time, simply tap the “heart” icon.

Tapping on the favorite will instantly activate those settings on your device and display a quick reminder of what grip patterns and triggers are included.

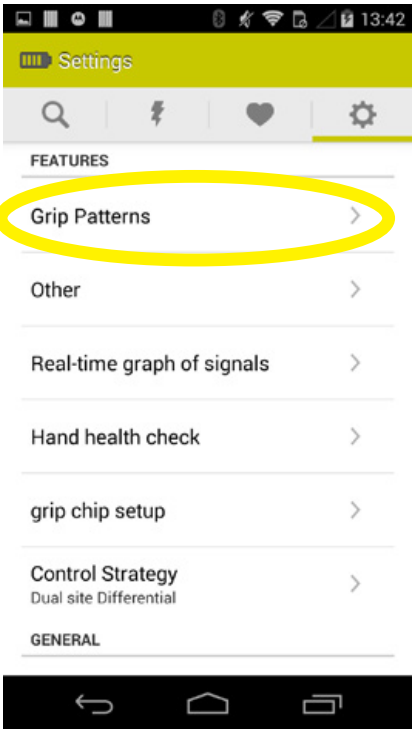


Creating a new favorite

Everyone has their own set of features and triggers that they prefer to use for different tasks. To set up a group of features, tap the “Settings” icon in the top right corner.

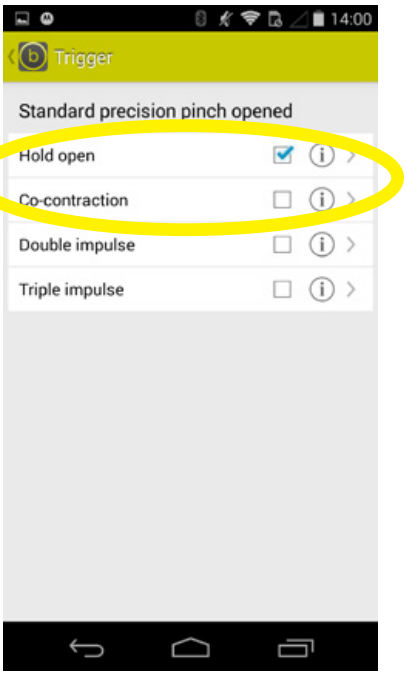


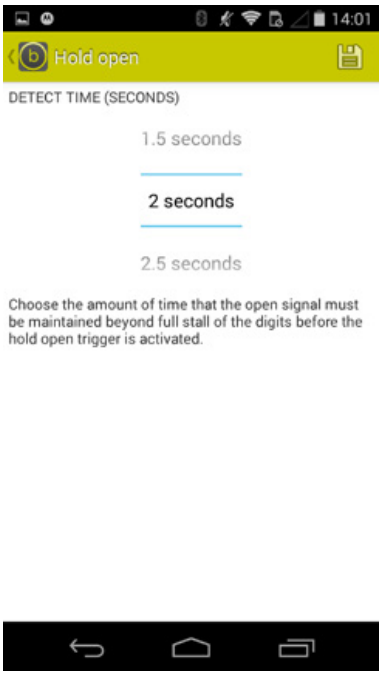
On the “Settings” menu, tap “Features – Grip patterns” to access the full set of grips available for selection. Exactly the same as biosim on your computer, from this screen you can choose the features that you like to group together.

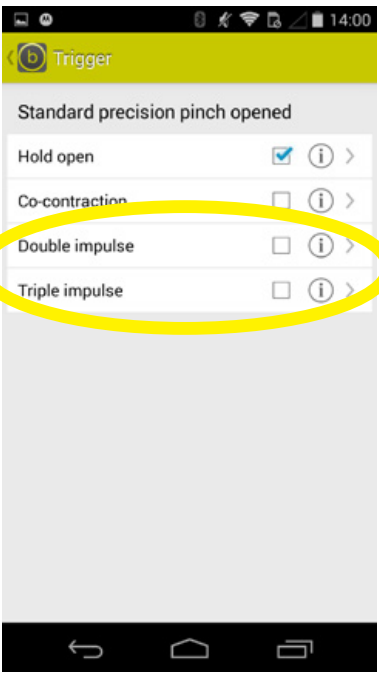


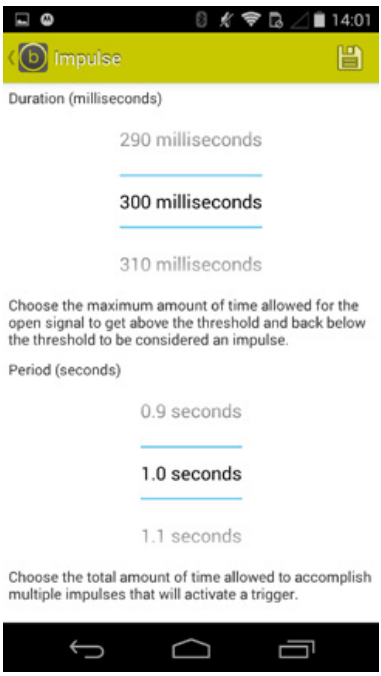
Assigning triggers

Tapping on a grip pattern will bring up a menu that allows you to assign one of the four possible triggers for activating it. You may also set detect time for “Hold open” and “Co-contraction” as well as duration and period times for “Double Impulse” and “Triple Impulse.”

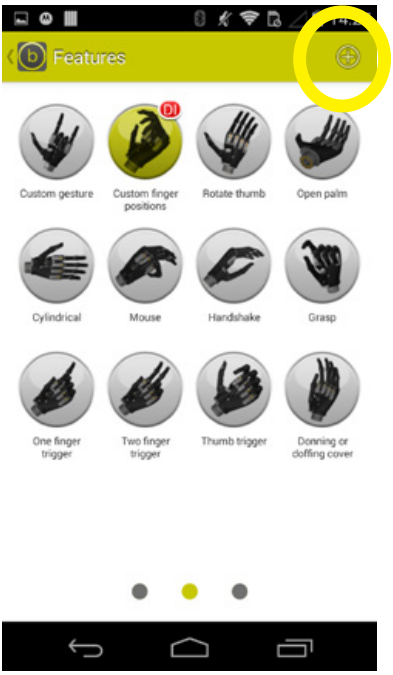



14:01
Hold open
DETECT TIME (SECONDS)
1.5 seconds
2 seconds
2.5 seconds
Choose the amount of time that the open signal must be maintained beyond full stall of the digits before the hold open trigger is activated.



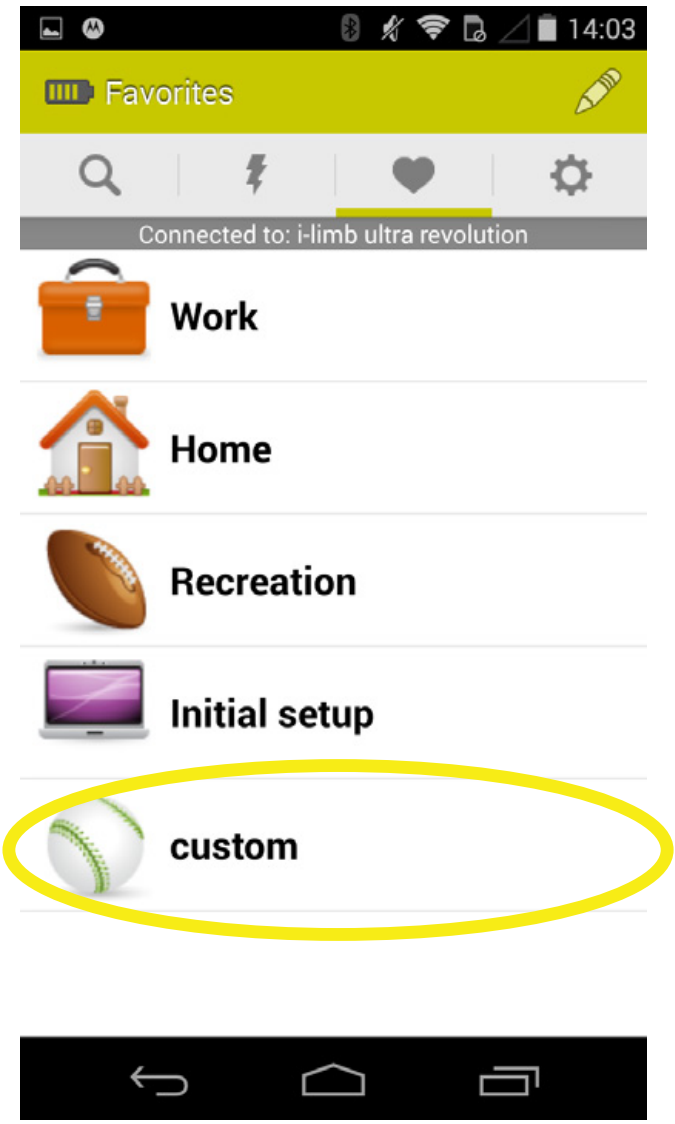

14:01
Impulse
Duration (milliseconds)
290 milliseconds
300 milliseconds
310 milliseconds
Choose the maximum amount of time allowed for the open signal to get above the threshold and back below the threshold to be considered an impulse.
Period (seconds)
0.9 seconds
1.0 seconds
1.1 seconds
Choose the total amount of time allowed to accomplish multiple impulses that will activate a trigger.

Once you have selected a group of grip patterns and triggers that you would like to be able to access as a single group of favorites, tap on the “+” icon in the top right of the Features screen. A screen will appear that allows you to choose a name and icon.



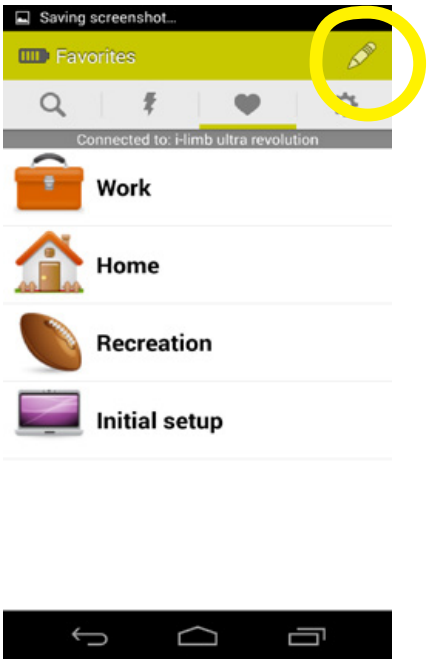
Note: A red symbol designating the assigned trigger will appear at the top right of the grip pattern(s).

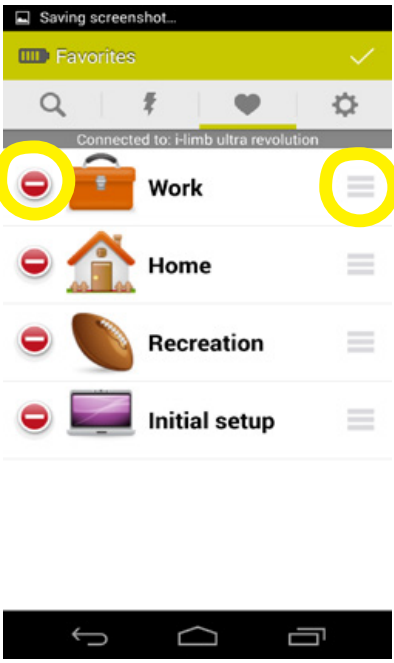
After you tap “Save” this favorite will now be added to your list on the “Favorites screen” of the biosim app and can be activated in the future with a single tap.



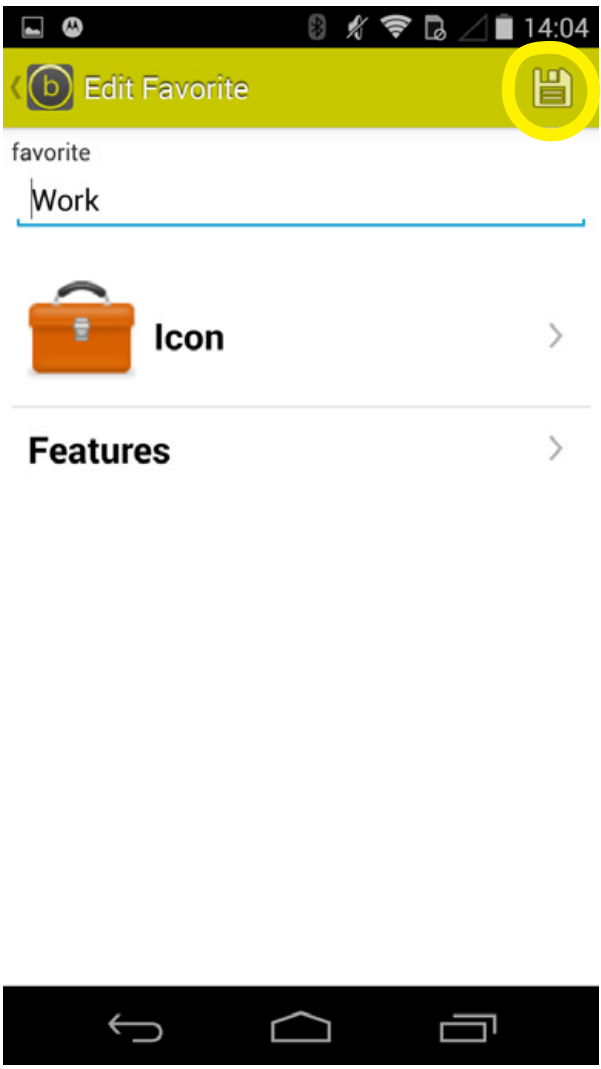
Editing favorites

Tap the edit button at the top right and the screen changes to look like the one seen below. Here, you can tap the red button to delete the favorite, grab the handles and drag to change the order of the list, and tap the name of the entry to edit the favorite.





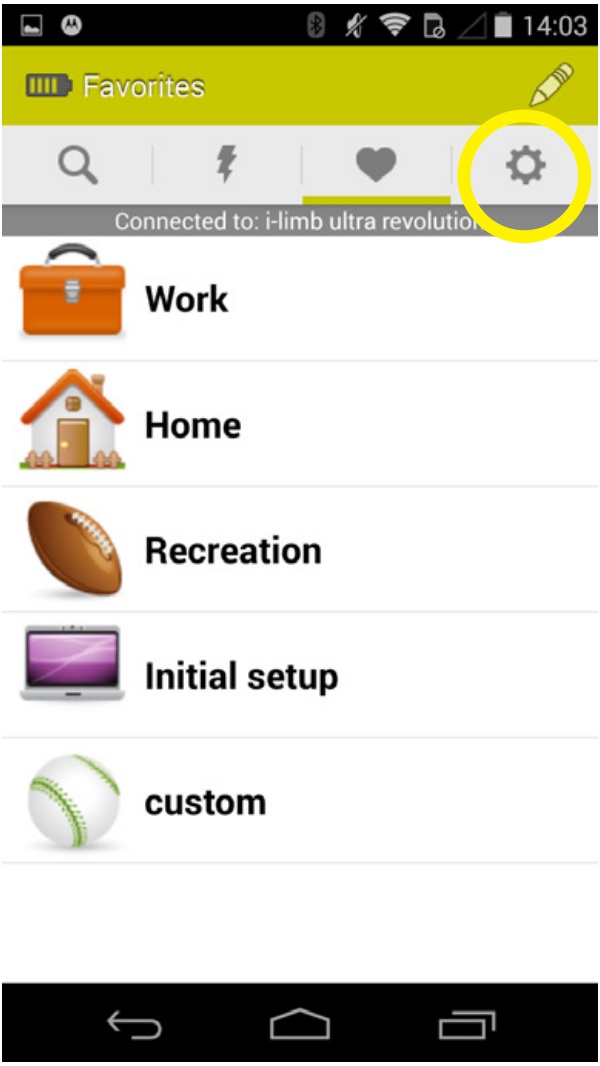
To edit any of your favorites, simply go into the favorite you would like change. Here you can modify the name, icon, grip pattern features, and triggers.



When editing features, you must return to the “Edit Favorite” screen above and tap “Save” to confirm your changes.

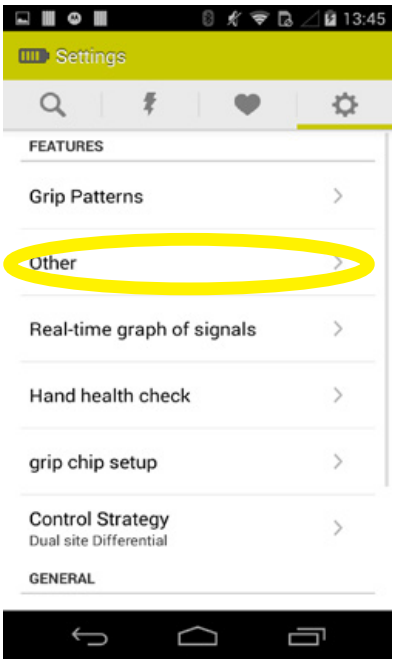
Settings

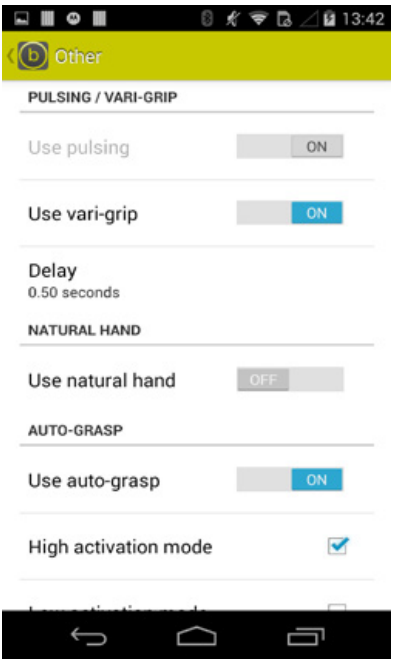
To access the “Settings” menu, tap the settings icon on the top right of the “Favorites” page.

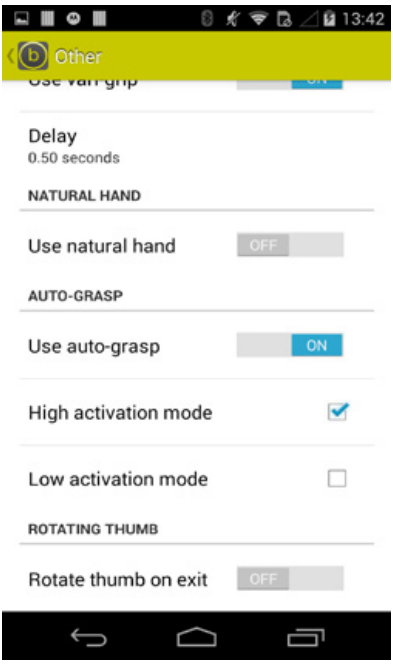


Other features

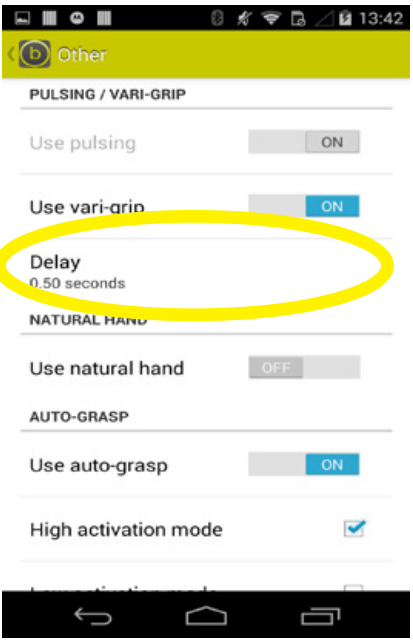
To access more features, back on the “Settings” menu, you can also select “Features-Other,” which will provide a new screen showing various options that can be turned “On or Off” and activated for further customization.

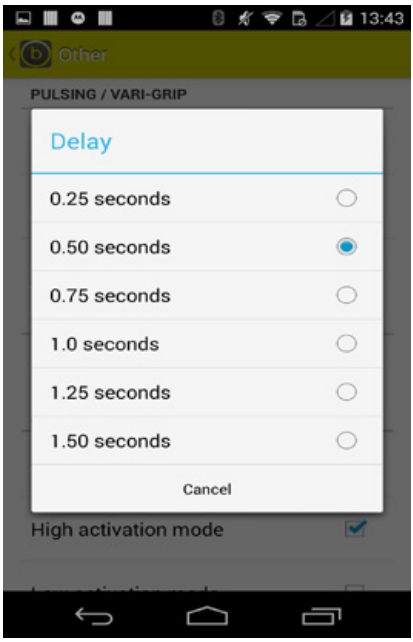


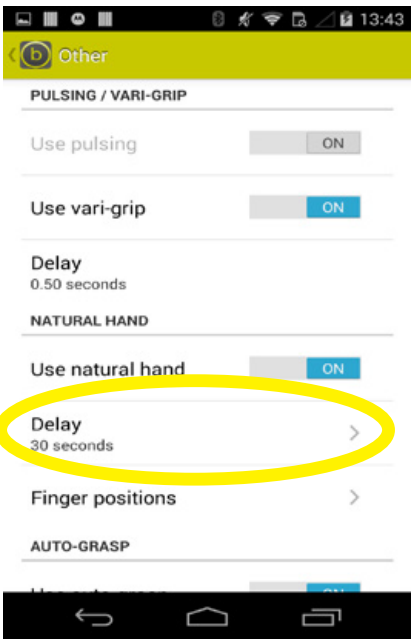


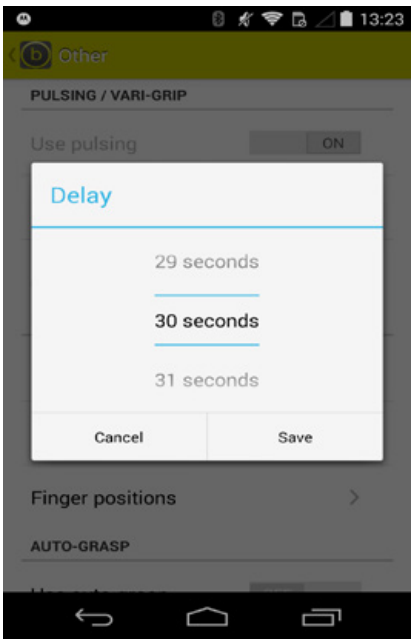


In addition to features that can be turned on or off and selected for further customization, delay timing can be adjusted for vari-grip and natural hand mode.

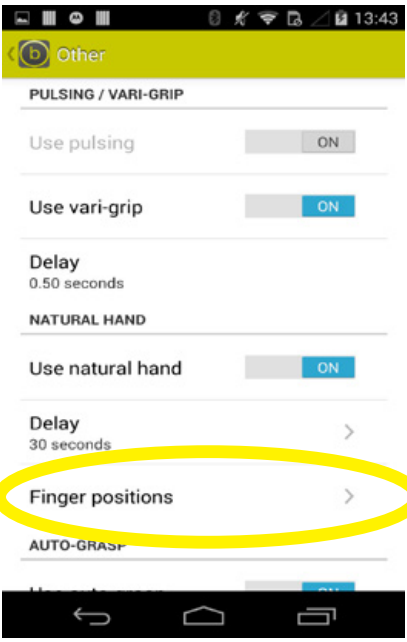


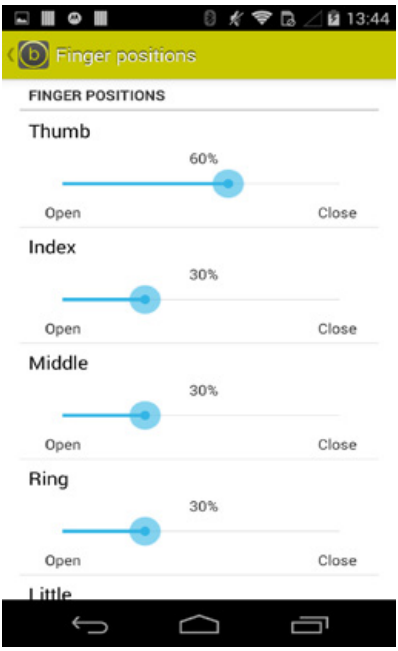


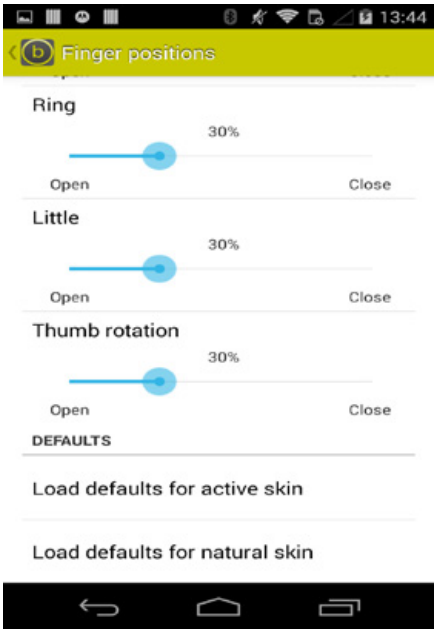




Finger positions can also be selected for natural hand and default values set for i-limb skin active or i-limb skin natural covers.

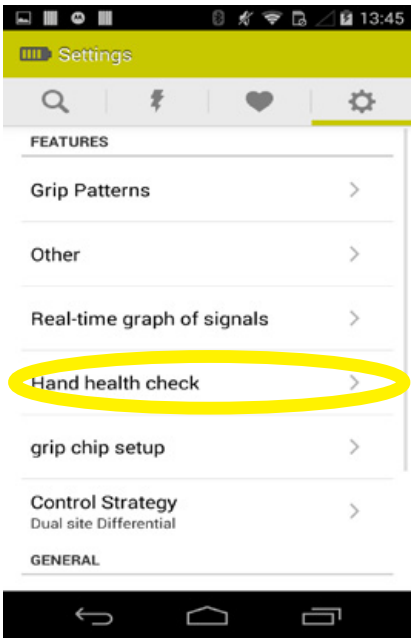


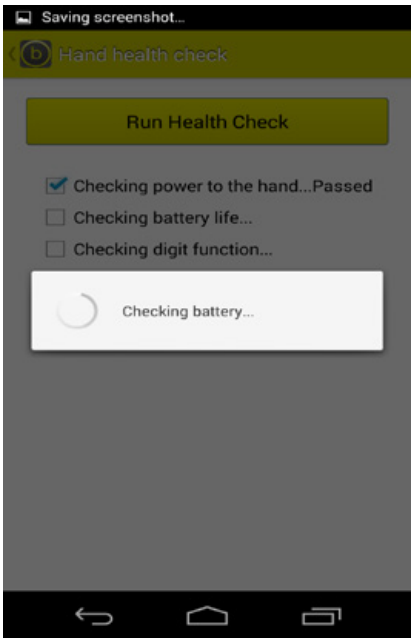


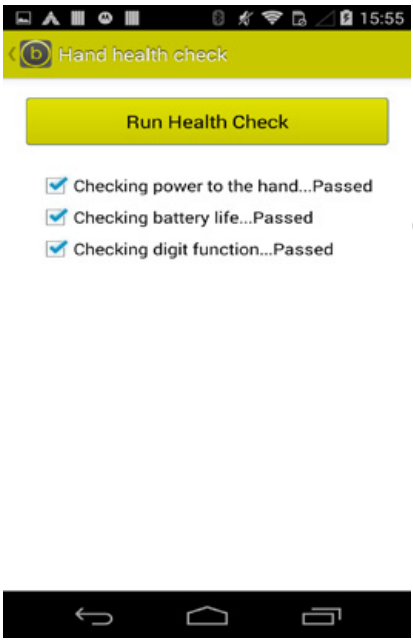


Hand health check

Selecting “hand health check” from the “Settings” menu brings up the option to run a test on an i-limb device to ensure that everything is running as it should. Tapping “Run health check” will run through a series of checks and will alert Touch Bionics to contact you if anything requires attention on your patient‘s i-limb device.







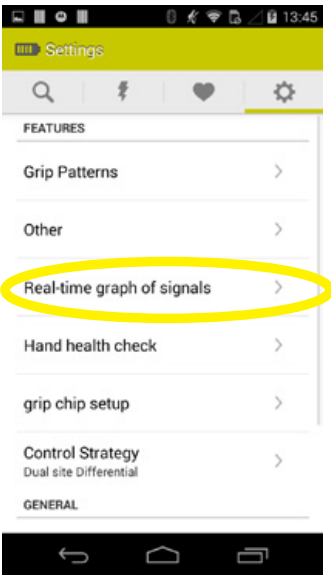
Note: You must be connected to the Internet using Wi-Fi or cellular to run a hand health check.

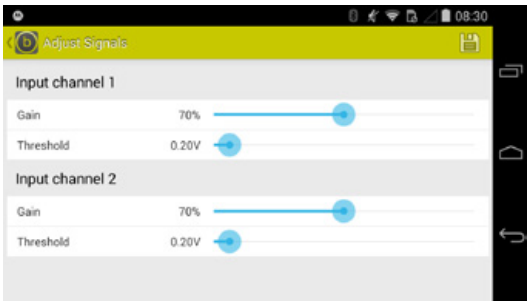
Real time graph

Selecting the “Real-time graph of signals” option from the “Settings” menu brings up a graph showing your input signals on the screen. This visual information can be helpful when trying to activate certain triggers or work on controlling activation and relaxation of signals.

- Turn the Android device horizontally to view the graph.
- Tap the graph to adjust the gain and threshold settings.

You can save an image of the Real-time Graph by tapping the camera on the top right of the screen."Saved" indicates that an image was successfully captured.

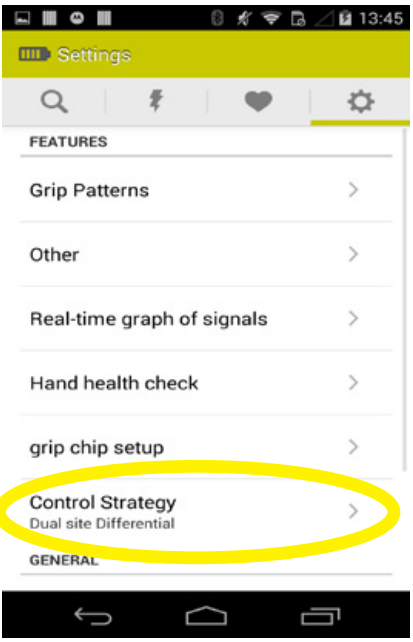


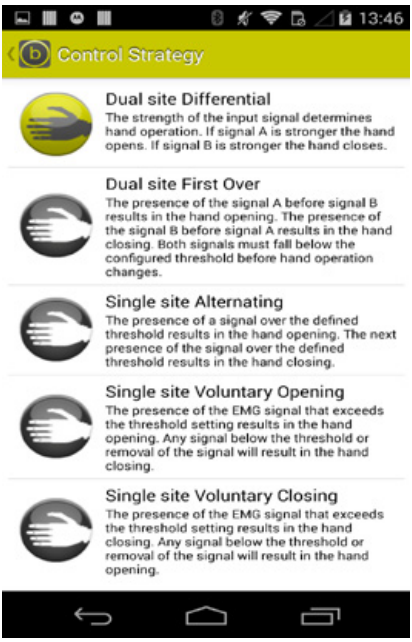


To exit the graph, simply turn the Android device back to a vertical position or tap “Done”.

Control strategy

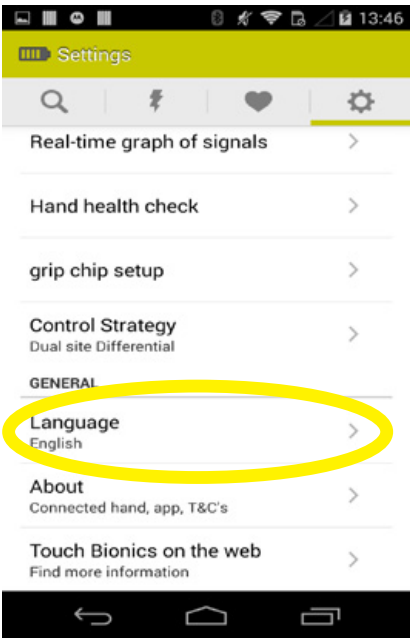
Control strategy is the method by which the i-limb device responds to the input signals. This option allows the clinician to switch how the device responds according to 5 options.

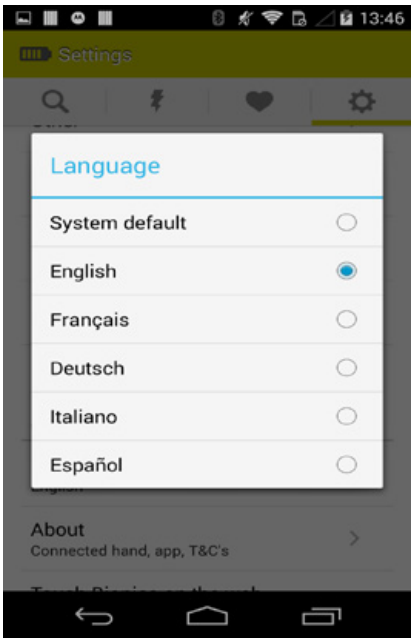



13:46
Control Strategy
Dual site Differential
The strength of the input signal determines hand operation. If signal A is stronger the hand opens. If signal B is stronger the hand closes.
Dual site First Over
The presence of the signal A before signal B results in the hand opening. The presence of the signal B before signal A results in the hand closing. Both signals must fall below the configured threshold before hand operation changes.
Single site Alternating
The presence of a signal over the defined threshold results in the hand opening. The next presence of the signal over the defined threshold results in the hand closing.
Single site Voluntary Opening
The presence of the EMG signal that exceeds the threshold setting results in the hand opening. Any signal below the threshold or removal of the signal will result in the hand closing.
Single site Voluntary Closing
The presence of the EMG signal that exceeds the threshold setting results in the hand closing. Any signal below the threshold or removal of the signal will result in the hand opening.

Languages

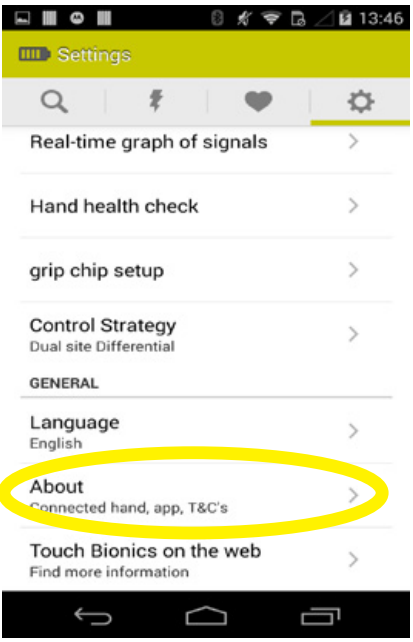
The default language setting is English. Select “Language” to change the settings to the appropriate language.

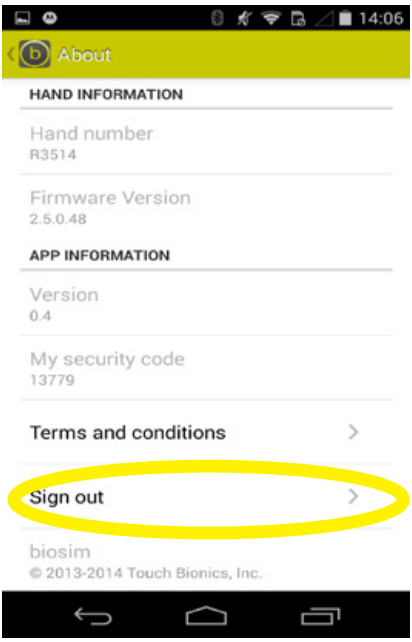




About

The final option on the “Settings” menu is the “About” option. Tapping this brings up a screen displaying information about the patient‘s prosthesis and the application. The unique security code will also be found here.





Tapping “Sign out” will end the session and require you to sign in again for your next session. For easy access, we recommend you remain signed in.

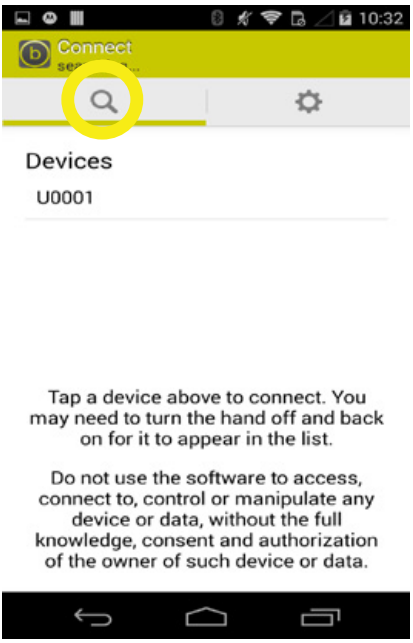
biosim™ App: Android

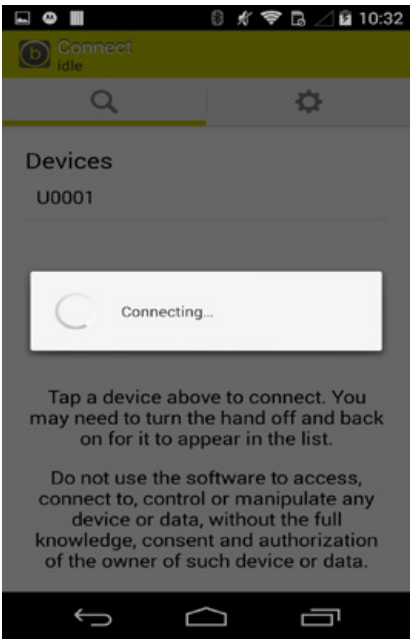
i-limb™ ultra

touch bionics

Connection

After signing in, you will be brought to the connection screen where you will tap the device to which you want to connect.


10:32
Connect
Devices
U0001
Tap a device above to connect. You may need to turn the hand off and back on for it to appear in the list.
Do not use the software to access, connect to, control or manipulate any device or data, without the full knowledge, consent and authorization of the owner of such device or data.

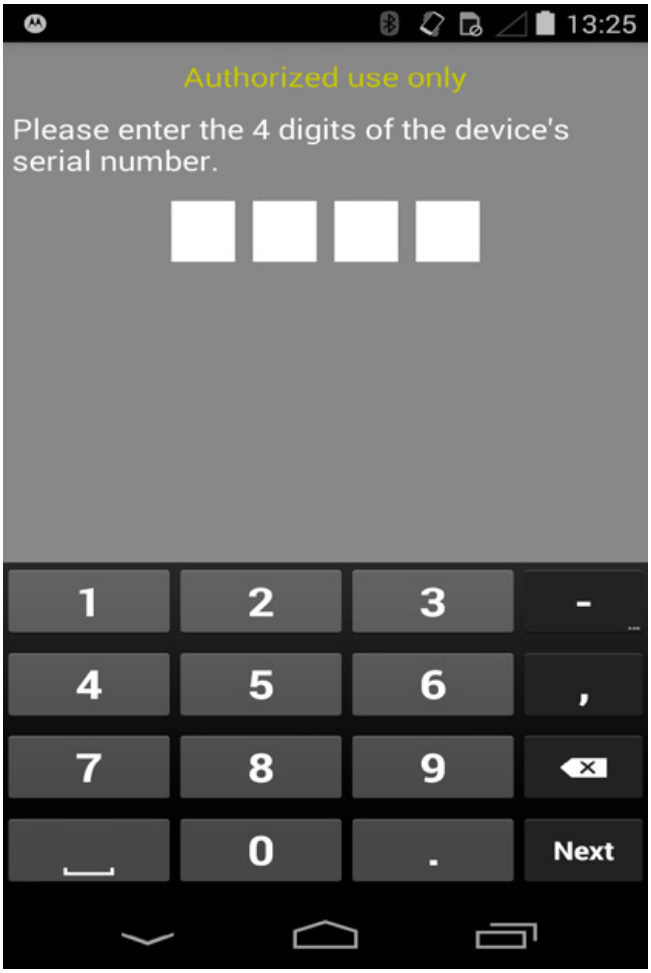

10:32
Connect
idle
Devices
U0001
Connecting...
Tap a device above to connect. You may need to turn the hand off and back on for it to appear in the list.
Do not use the software to access, connect to, control or manipulate any device or data, without the full knowledge, consent and authorization of the owner of such device or data.

Searching for another device

If you need to connect to a different device, simply tap the magnifying glass in the top left corner of the app and it will search for any devices in the area.

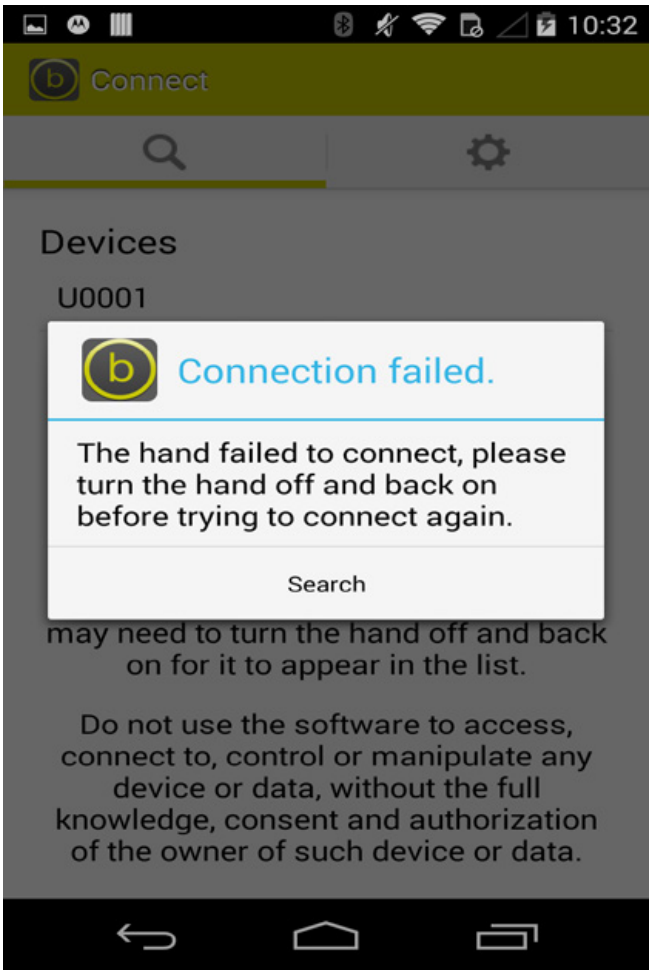
Authorized User Access

In order for you to connect to a patient's device, they will need to tell you their 4 digit serial number located proximal to the base of the thumb on the connection plate. If the patient has a flexion wrist, the serial number will appear at the base of the thumb You will be prompted to enter this after selecting the patient's device.



Connection failed

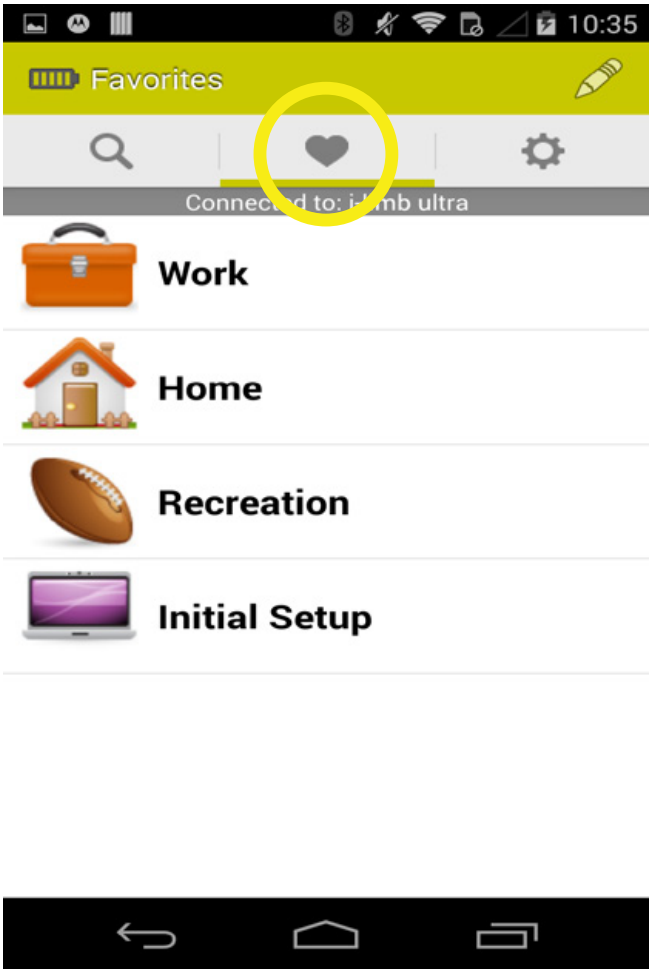
If the hand should fail to connect to the app due to loss of power, proximity with the Android device, or other reasons, the following screen will appear:


10:32
Connect
Devices
U0001
Connection failed.
The hand failed to connect, please turn the hand off and back on before trying to connect again.
Search
may need to turn the hand off and back on for it to appear in the list.
Do not use the software to access, connect to, control or manipulate any device or data, without the full knowledge, consent and authorization of the owner of such device or data.

In this instance, turn off the i-limb ultra for 4 seconds, then turn back on. Tap the “Search” button to reconnect.

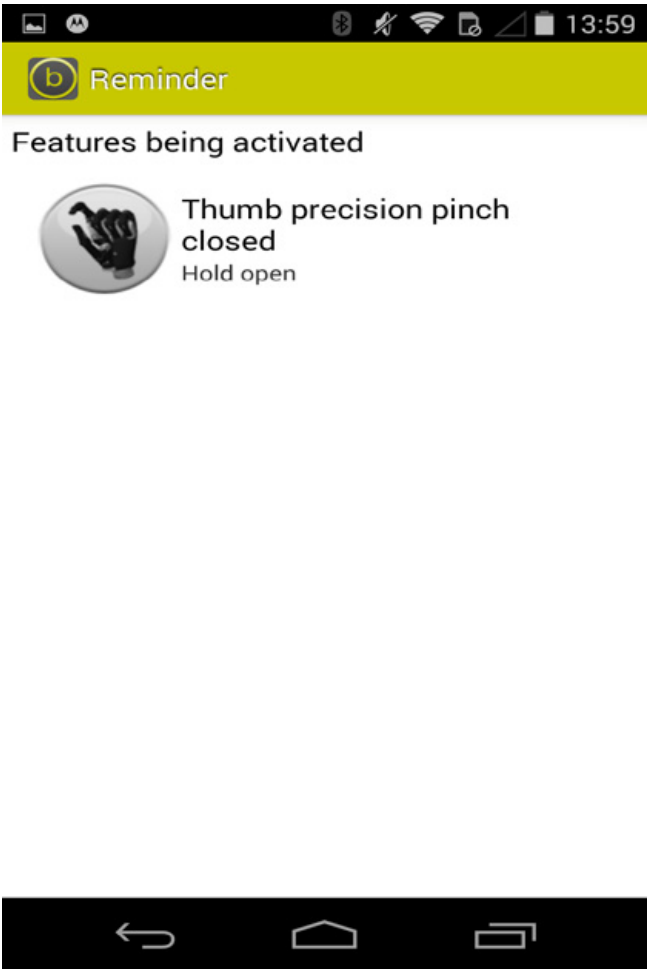
Favorites screen

Here you can assign groups of grip patterns and triggers a single name to make them easily accessible with a single tap.



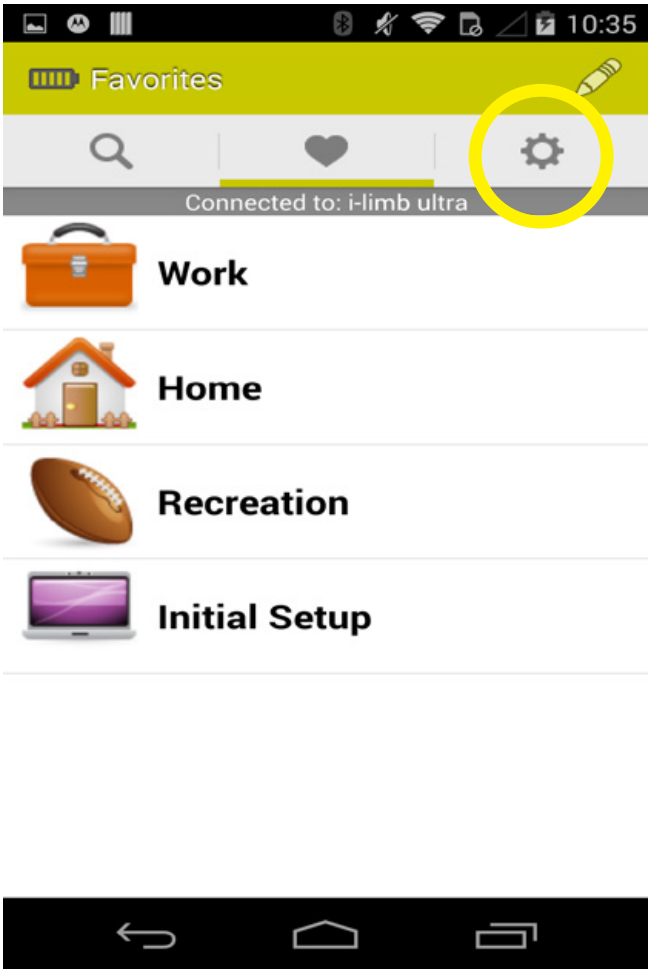
Note: To access the “Favorites” screen at any time, simply tap the “heart” icon.

Tapping on the favorite will instantly activate those settings on the device and display a quick reminder of what grip patterns and triggers are included.

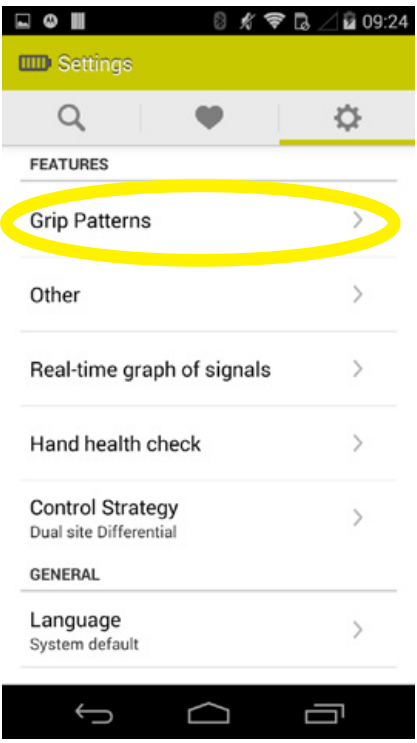


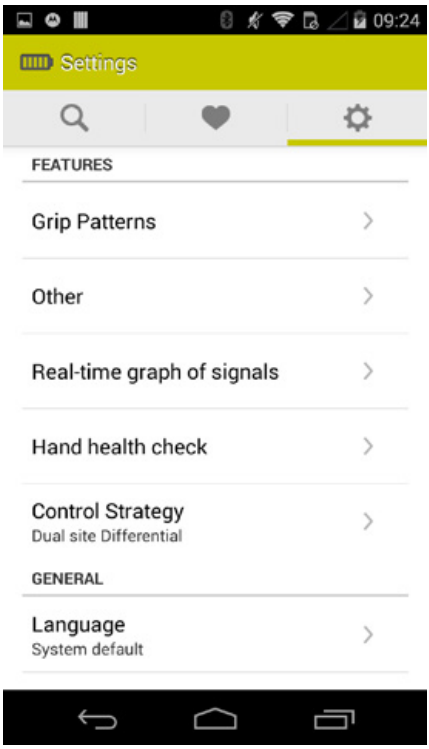
Creating a new favorite

Everyone has their own set of features and triggers that they prefer to use for different tasks. To set up a group of features, tap the Settings icon in the top right corner.



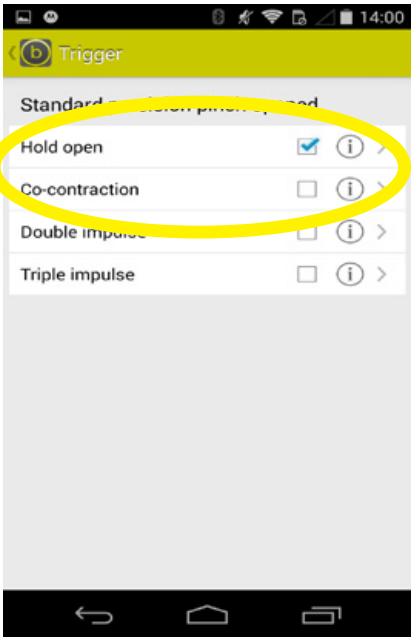
On the “Settings” menu, tap “Features – Grip patterns” to access the full set of grips available for selection. Exactly the same as biosim on your computer, from this screen you can choose the features that you would like to group together.

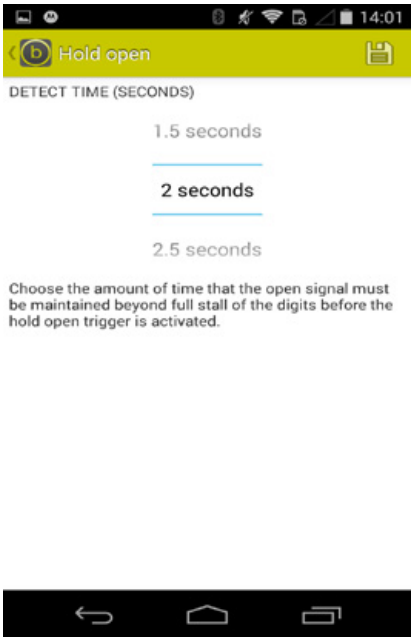


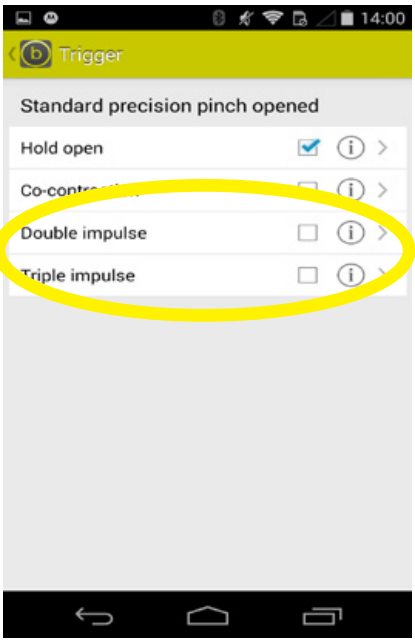


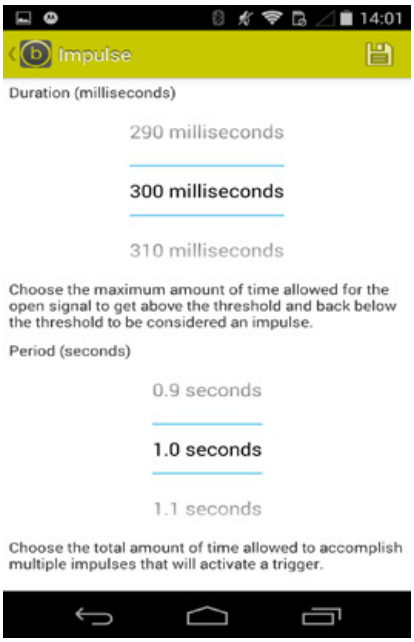
Assigning triggers

Tapping on a grip pattern will bring up a menu that allows you to assign one of the four possible triggers for activating it. You may also set detect time for “Hold open” and “Co-contraction” as well as duration and period times for "Double Impulse" and "Triple Impulse."



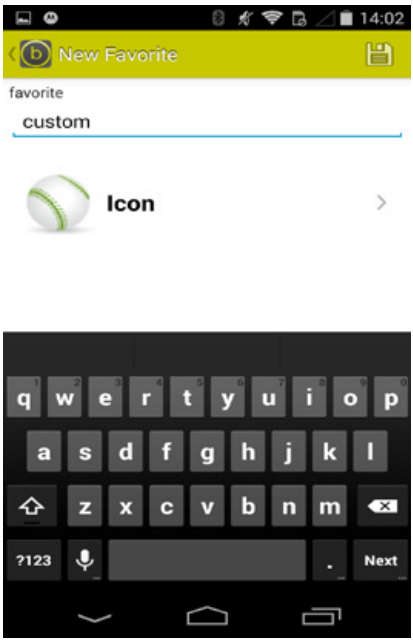

14:01
Hold open
DETECT TIME (SECONDS)
1.5 seconds
2 seconds
2.5 seconds
Choose the amount of time that the open signal must be maintained beyond full stall of the digits before the hold open trigger is activated.



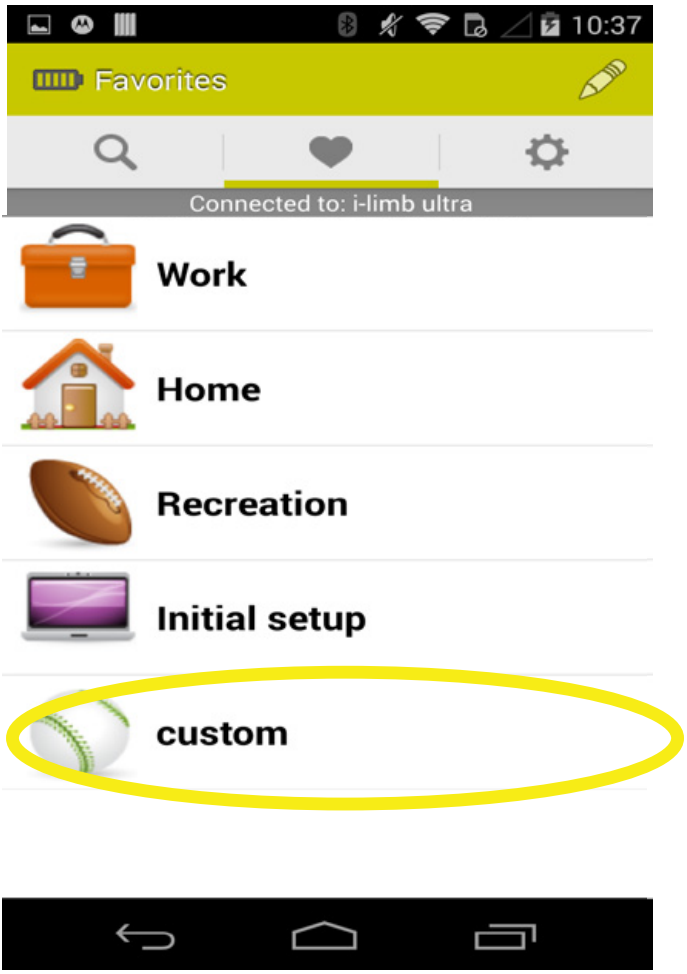

14:01
Impulse
Duration (milliseconds)
290 milliseconds
300 milliseconds
310 milliseconds
Choose the maximum amount of time allowed for the open signal to get above the threshold and back below the threshold to be considered an impulse.
Period (seconds)
0.9 seconds
1.0 seconds
1.1 seconds
Choose the total amount of time allowed to accomplish multiple impulses that will activate a trigger.

Once you have selected a group of grip patterns and triggers that you would like to be able to access as a single group of favorites, tap on the “+” icon in the top right of the Features screen. A screen will appear that allows you to choose a name and icon.

Note: A red symbol designating the assigned trigger will appear at the top right of the grip pattern(s).

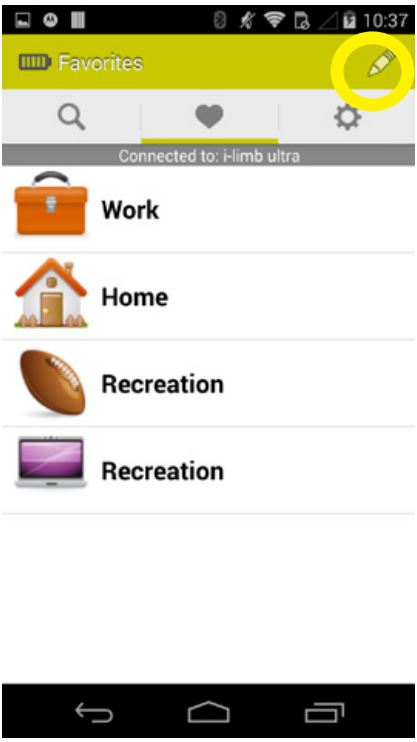


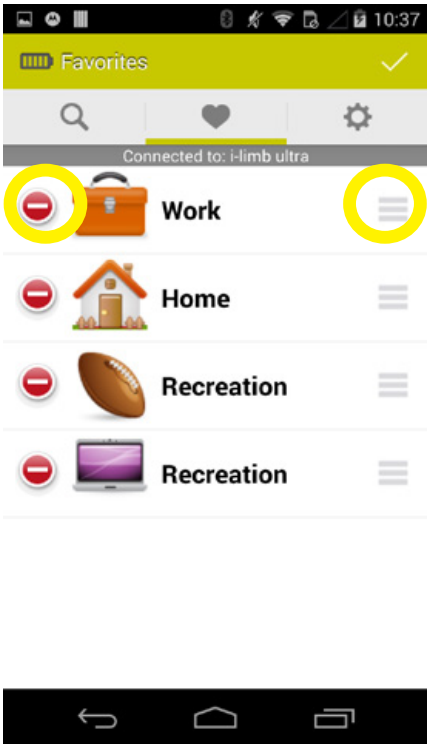
After you tap “Save” this favorite will now be added to your list on the “Favorites” screen of the biosim app and can be activated in the future with a single tap.



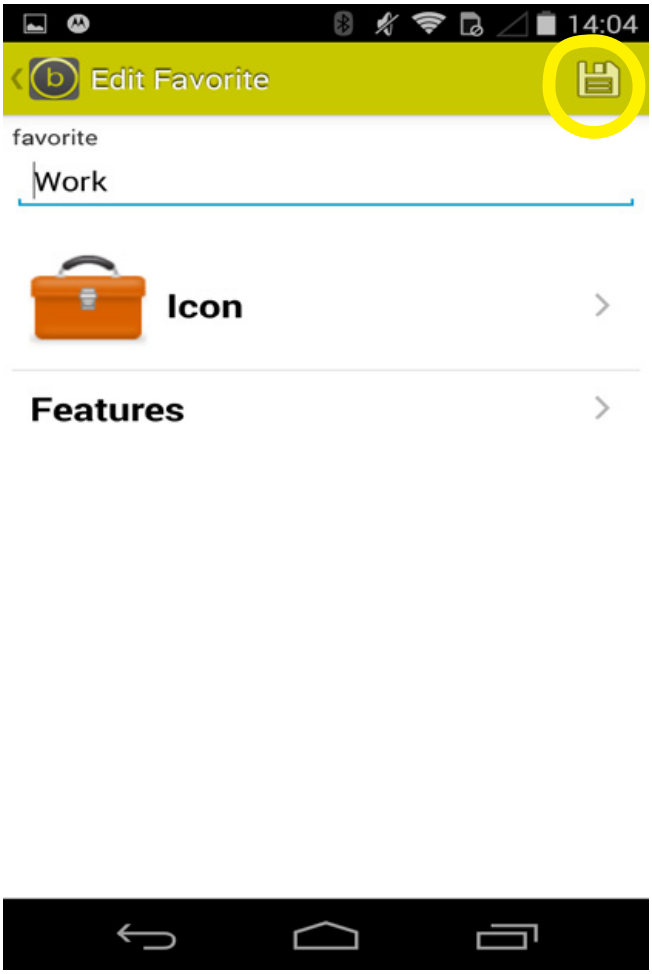
Editing favorites

Tap the edit button at the top right and the screen changes to look like the one seen below. Here, you can tap the red button to delete the favorite, grab the handles and drag to change the order of the list, and tap the name of the entry to edit the favorite.





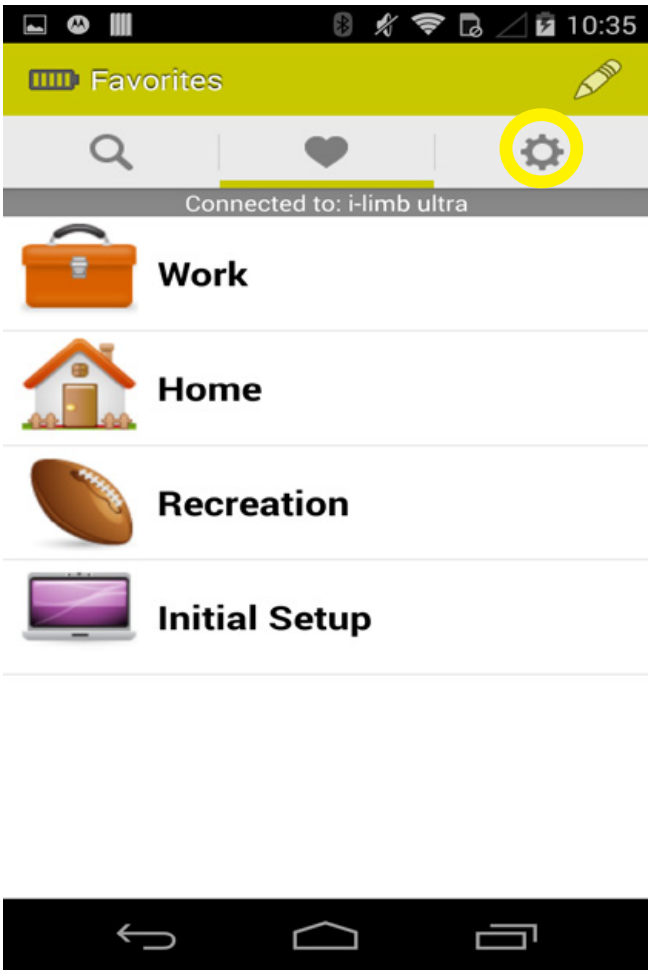
To edit any of your favorites, simply go into the favorite you would like change. Here you can modify the name, icon, grip pattern features, and triggers.



When editing features, you must return to the “Edit Favorite“ screen above and tap “Save“ to confirm your changes.

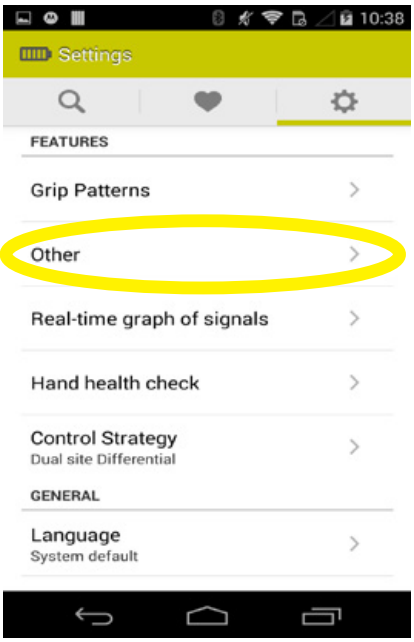
Settings

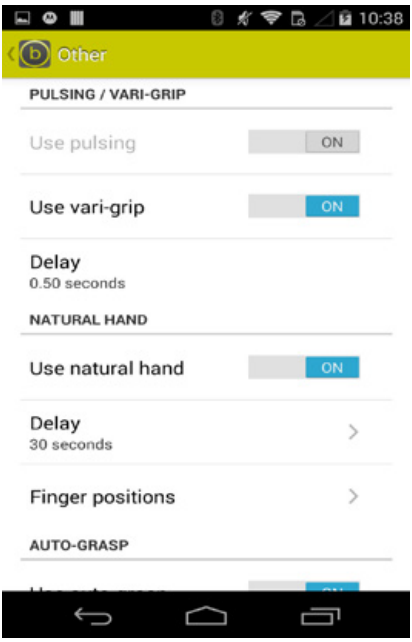
To access the “Settings” menu, tap the settings icon on the top right of the “Favorites” page.

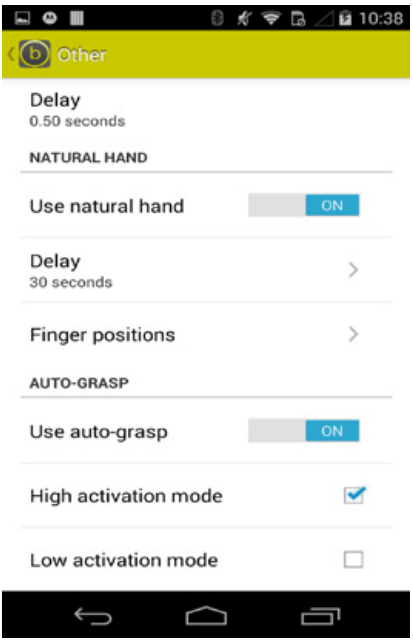


Other features

To access more features, back on the “Settings” menu, you can also select “Features-Other,” which will provide a new screen showing various options that can be turned “On or Off" and activated for further customization.

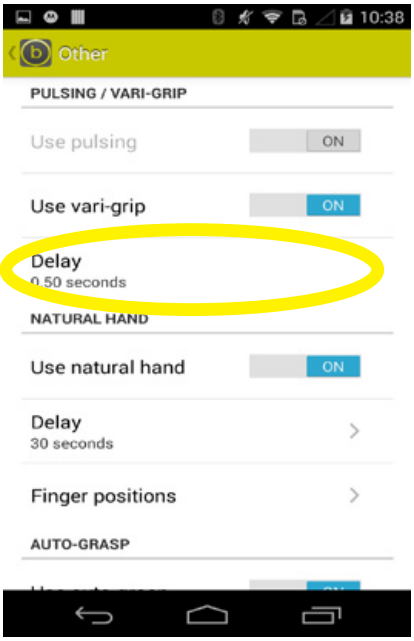


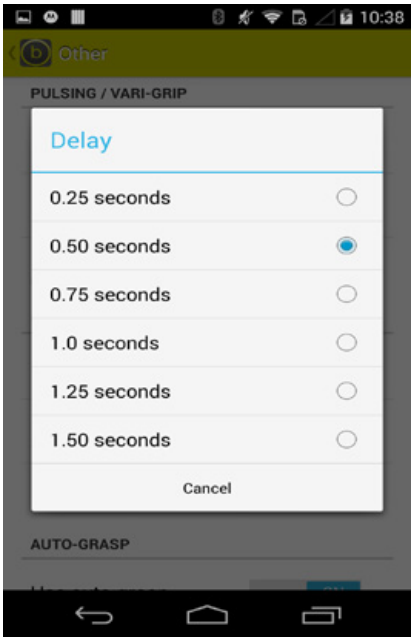


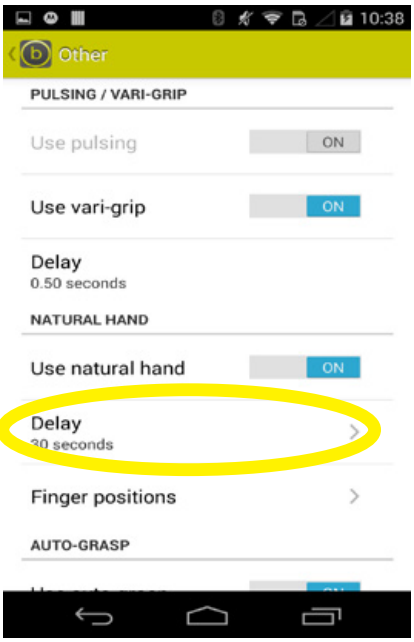


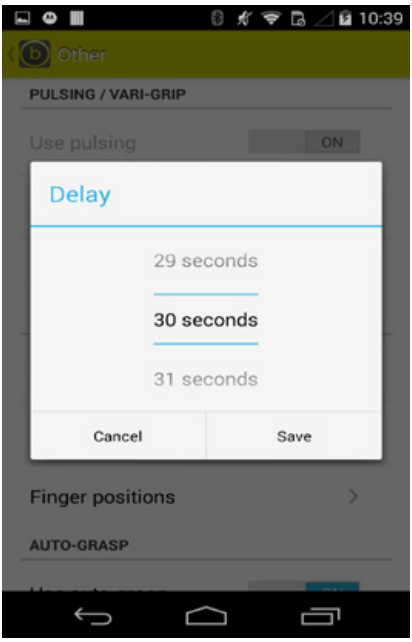
Other features

In addition to features that can be turned on or off and selected for further customization, timing delay can be adjusted for vari-grip and natural hand mode.



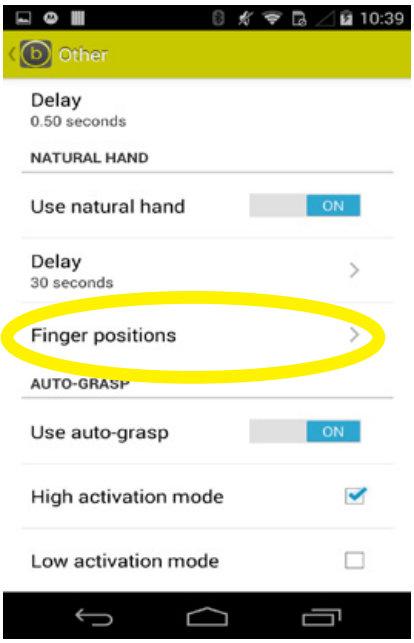


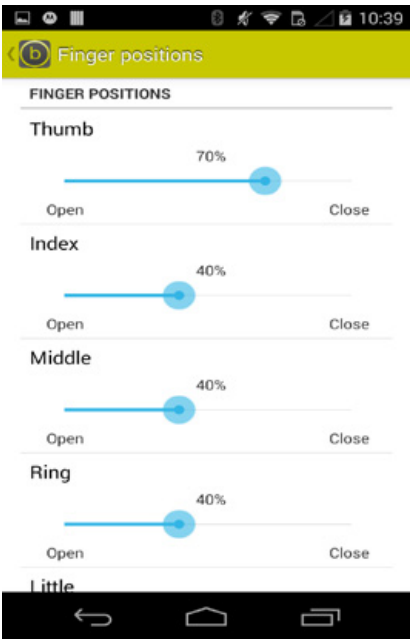


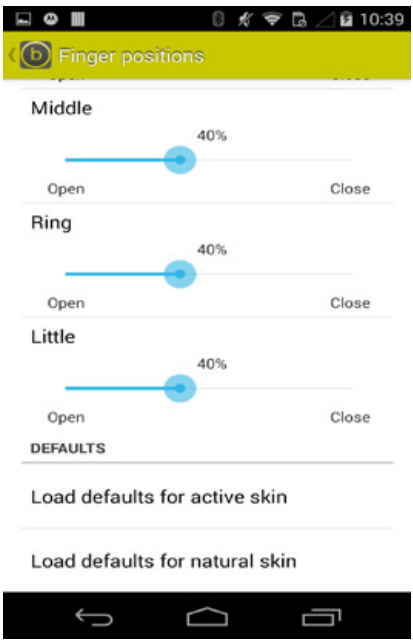


Other features

Finger positions can also be selected for natural hand and default values set for i-limb skin active or i-limb skin natural covers.

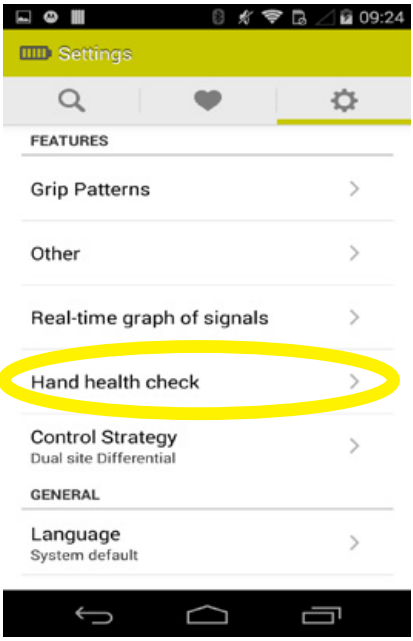


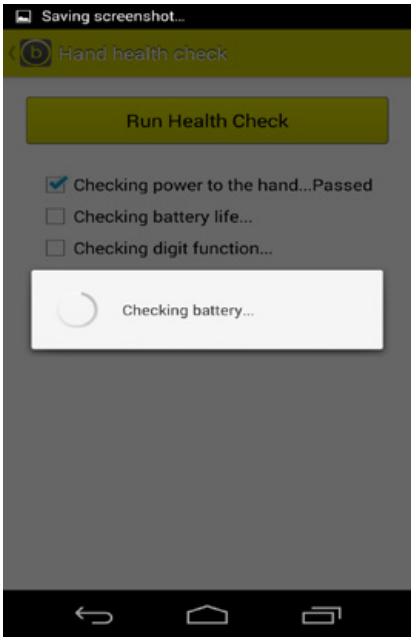


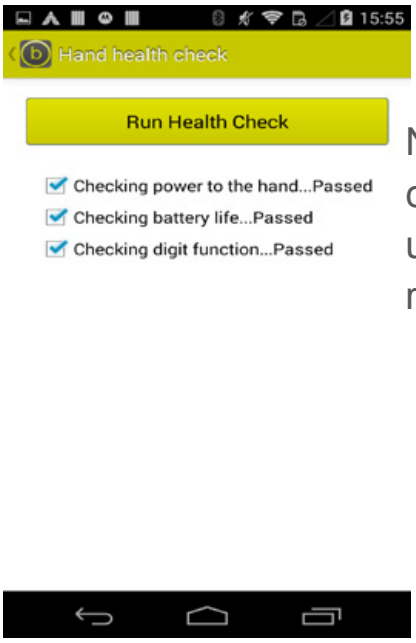


Hand health check

Selecting “Hand health check” from the “Settings” menu brings up the option to run a test on the device to ensure that everything is running as it should. Tapping “Run health check” will run through a series of checks and will alert Touch Bionics to contact you if anything requires attention on your patient‘s i-limb device.







Note: You must be connected to the Internet using Wi-Fi or cellular to run a hand health check

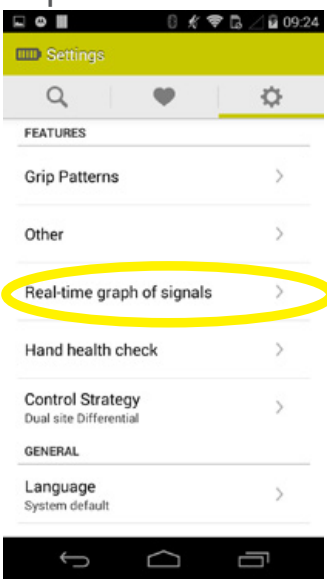
Real time graph

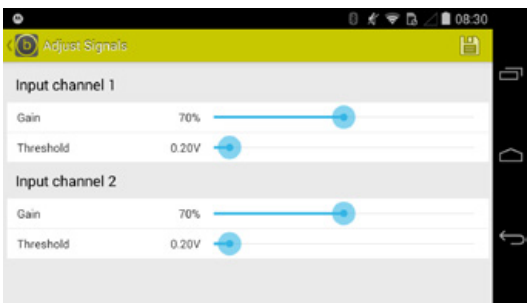
Selecting the “Real-time graph of signals” option from the “Settings” menu brings up a graph showing the patients input signals on the screen. This visual information can be helpful when trying to activate certain triggers or work on controlling activation and relaxation of signals

Turn the Android device horizontally to view the graph.

Tap the graph to adjust the gain and threshold settings.

You can save an image of the Real-time Graph by tapping the camera on the top right of the screen. “Saved” indicates that an image was successfully captured.

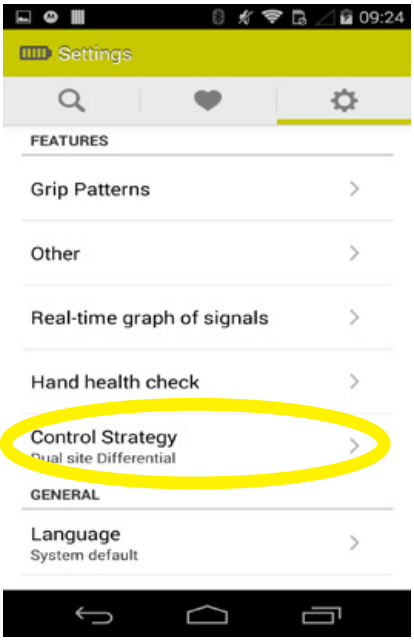


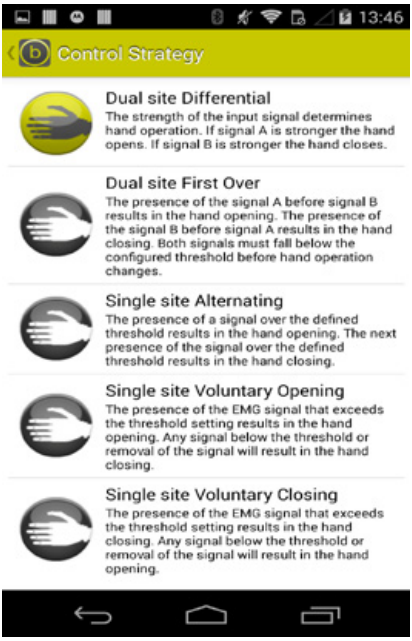


To exit the graph, simply turn the Android device back to a vertical position or tap “Done”.

Control strategy

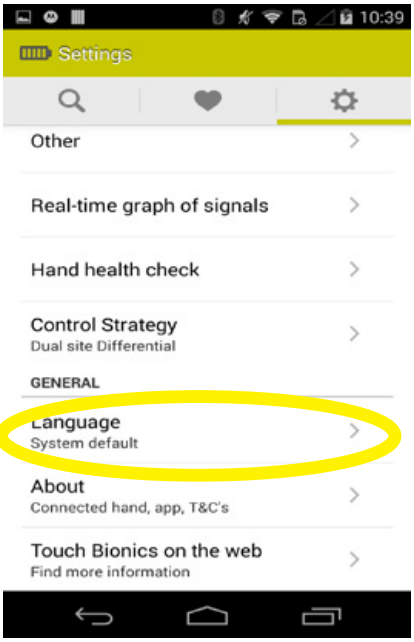
Control strategy is the method by which the i-limb device responds to the input signals. This option allows the clinician to switch how the device responds according to 5 options.

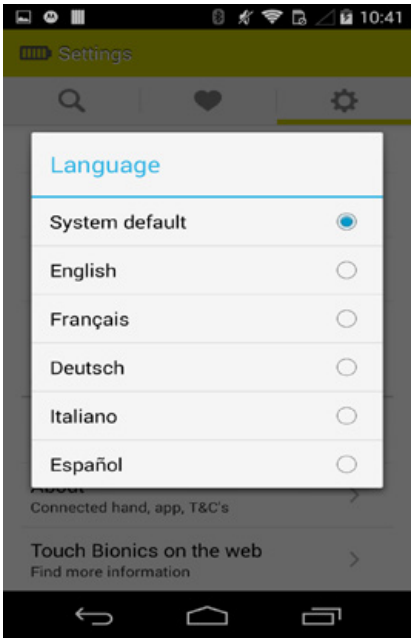



13:46
Control Strategy
Dual site Differential
The strength of the input signal determines hand operation. If signal A is stronger the hand opens. If signal B is stronger the hand closes.
Dual site First Over
The presence of the signal A before signal B results in the hand opening. The presence of the signal B before signal A results in the hand closing. Both signals must fall below the configured threshold before hand operation changes.
Single site Alternating
The presence of a signal over the defined threshold results in the hand opening. The next presence of the signal over the defined threshold results in the hand closing.
Single site Voluntary Opening
The presence of the EMG signal that exceeds the threshold setting results in the hand opening. Any signal below the threshold or removal of the signal will result in the hand closing.
Single site Voluntary Closing
The presence of the EMG signal that exceeds the threshold setting results in the hand closing. Any signal below the threshold or removal of the signal will result in the hand opening.

Languages

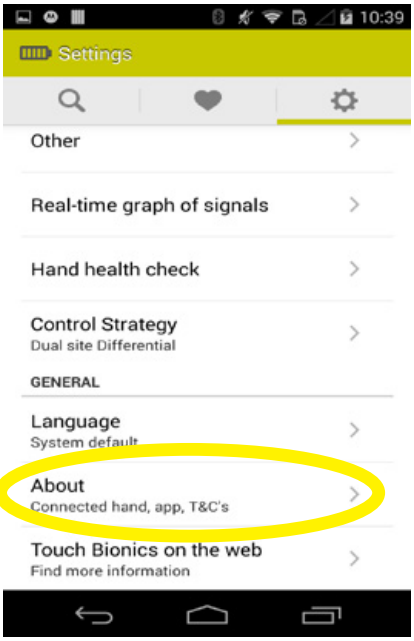
The default language setting is English. Select “Language” to change the settings to the appropriate language.

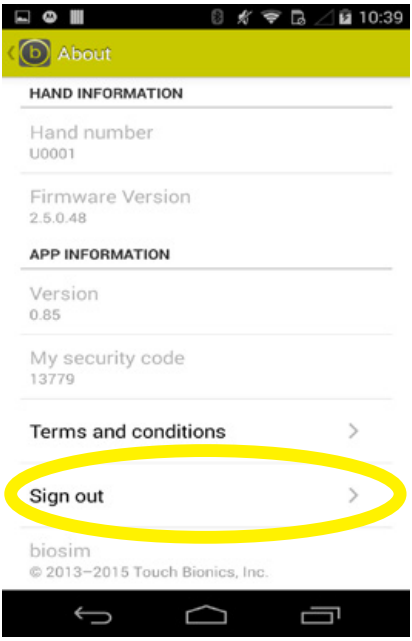




About

The final option on the “Settings” menu is the “About” option. Tapping this brings up a screen displaying information about the patient‘s prosthesis and the application. The unique security code will also be found here.





Tapping “Sign out” will end the session and require you to sign in again for your next session. For easy access, we recommend you remain signed in.

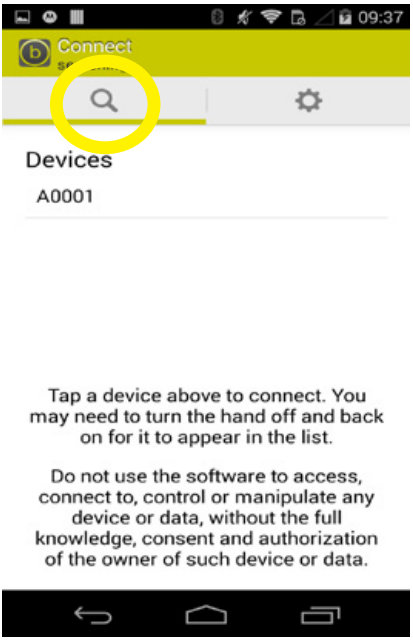
biosim™ App: Android

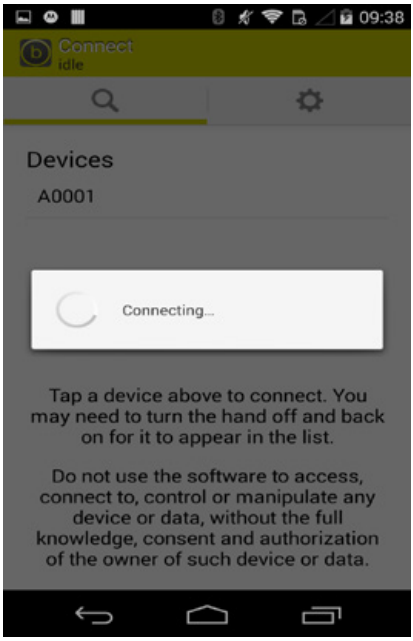
i-limb™ access

touch bionics

Connection

After signing in, you will be brought to the connection screen where you will tap the device to which you want to connect.


09:37
Connect
Devices
A0001
Tap a device above to connect. You may need to turn the hand off and back on for it to appear in the list.
Do not use the software to access, connect to, control or manipulate any device or data, without the full knowledge, consent and authorization of the owner of such device or data.

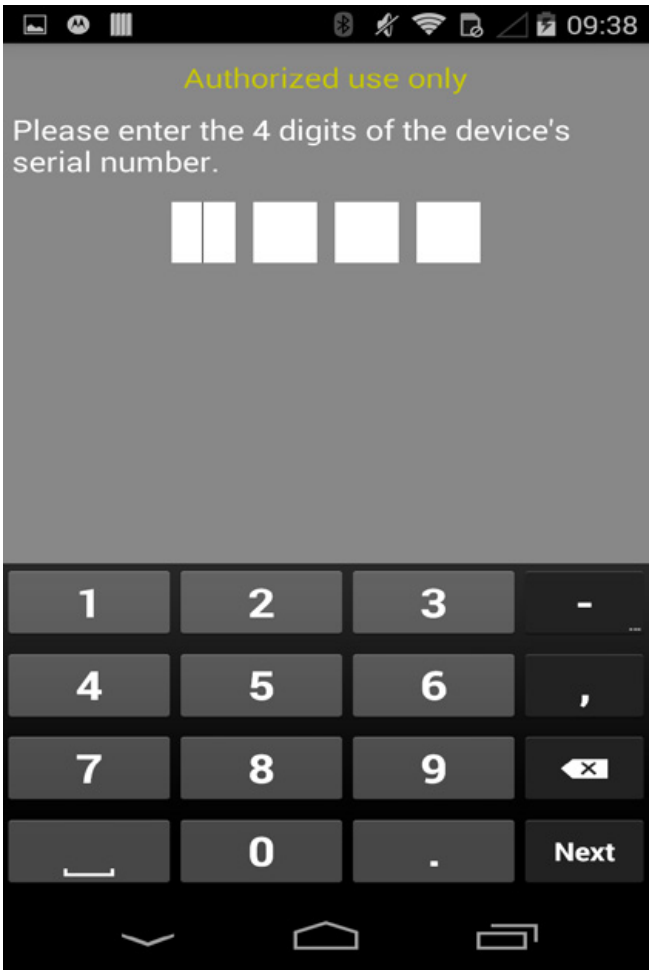

09:38
Connect
idle
Devices
A0001
Connecting...
Tap a device above to connect. You may need to turn the hand off and back on for it to appear in the list.
Do not use the software to access, connect to, control or manipulate any device or data, without the full knowledge, consent and authorization of the owner of such device or data.

Searching for another device

If you need to connect to a different device, simply tap the magnifying glass in the top left corner of the app and it will search for any devices in the area.

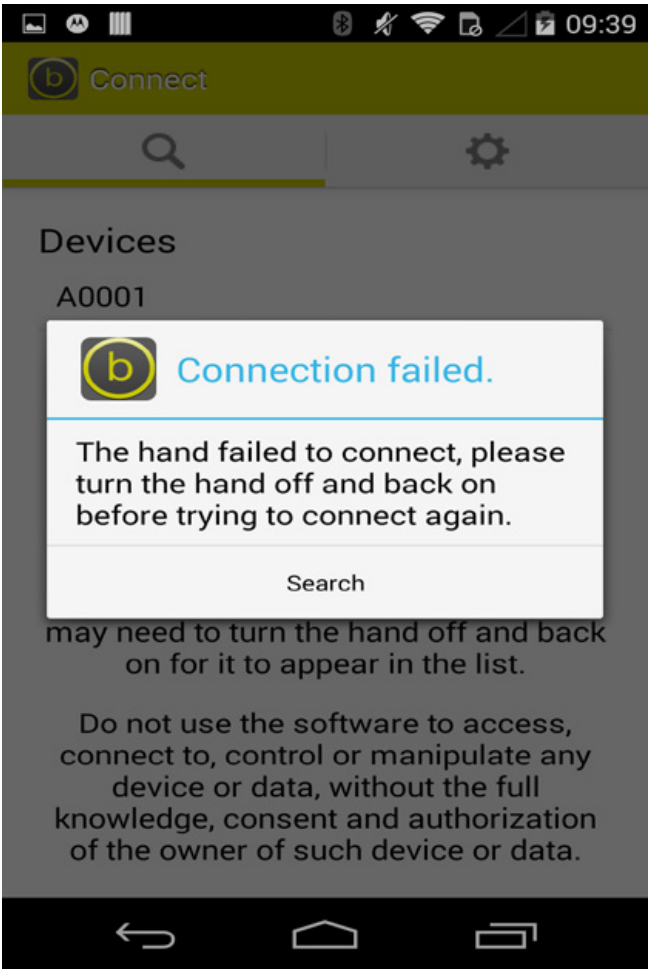
Authorized User Access

In order for you to connect to a patient's device, they will need to tell you their 4 digit serial number located proximal to the base of the thumb on the connection plate. If the patient is using a flexion wrist, the serial number will appear at the base of the thumb. You will be prompted to enter this after selecting the patient's device.



Connection failed

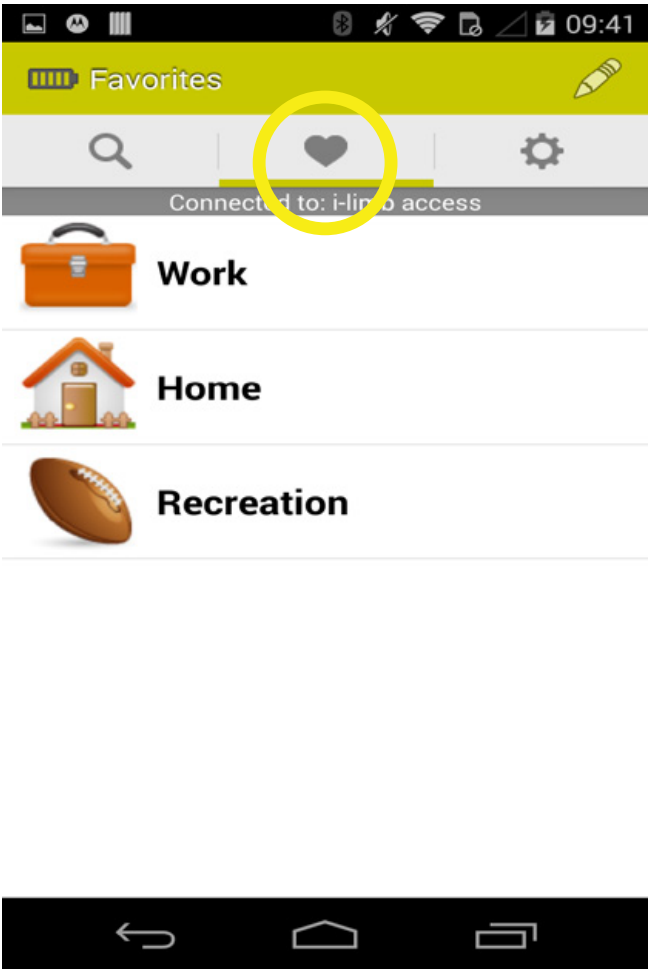
If the hand should fail to connect to the app due to loss of power, proximity with the Android device, or other reasons, the following screen will appear:


09:39
Connect
Devices
A0001
Connection failed.
The hand failed to connect, please turn the hand off and back on before trying to connect again.
Search
may need to turn the hand off and back on for it to appear in the list.
Do not use the software to access, connect to, control or manipulate any device or data, without the full knowledge, consent and authorization of the owner of such device or data.

In this instance, turn off the i-limb access for 4 seconds, then turn back on. Tap the “Search” button to reconnect.

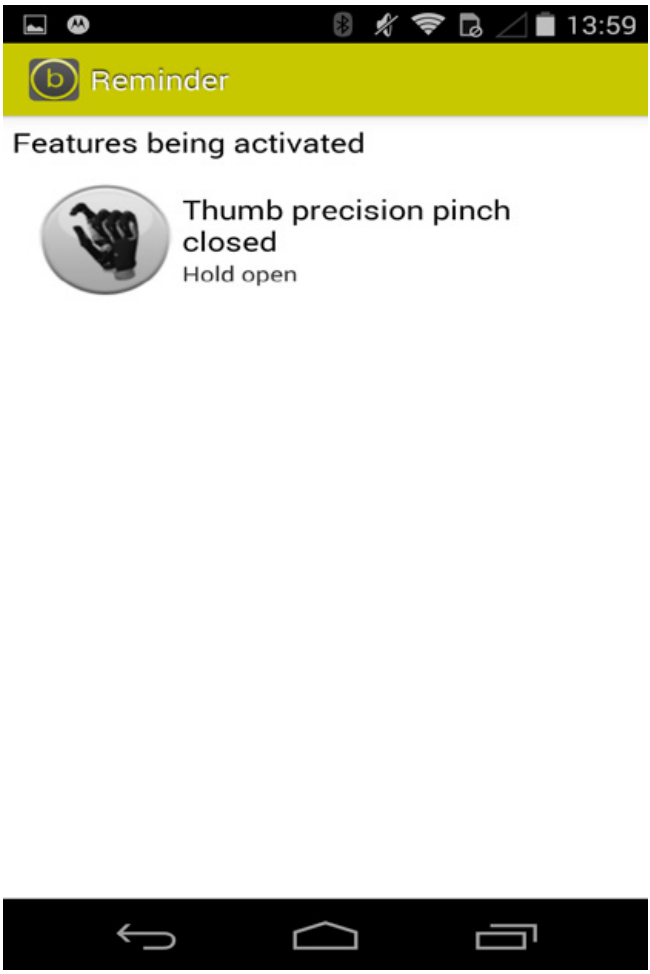
Favorites screen

Here you can assign groups of grip patterns and triggers a single name to make them easily accessible with a single tap.



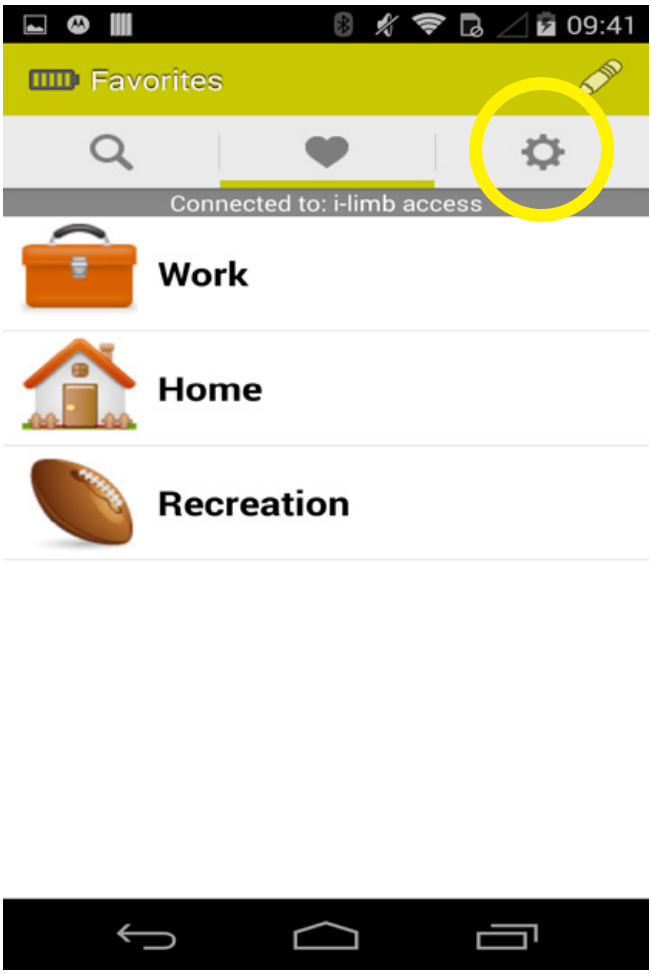
Note: To access the Favorites screen at any time, simply tap the “heart” icon.

Tapping on the favorite will instantly activate those settings on the device and display a quick reminder of what grip patterns and triggers are included.

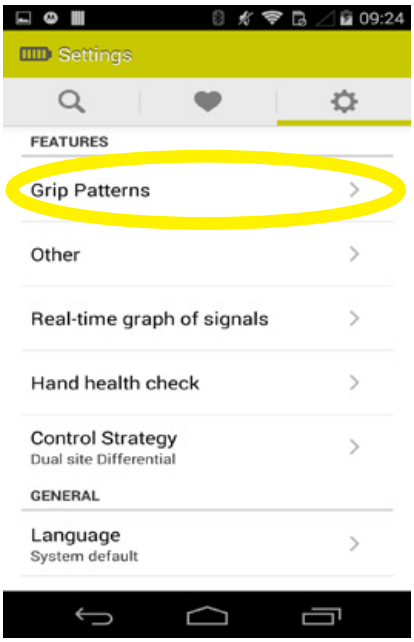


Creating a new favorite

Everyone has their own set of features and triggers that they prefer to use for different tasks. To set up a group of features, tap the settings icon in the top right corner.



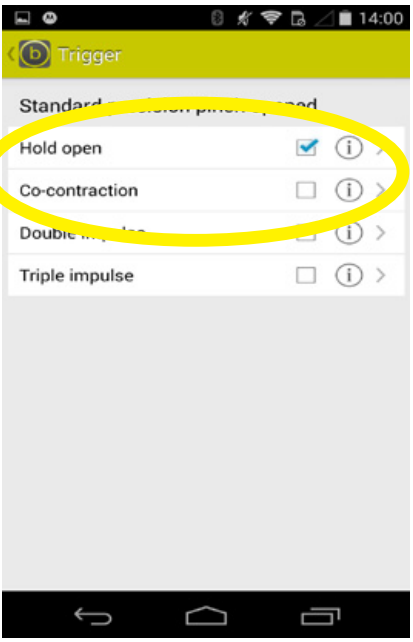
On the “Settings” menu, tap “Features – Grip patterns” to access the full set of grips available for selection. From this screen, you can choose the features that you would like to group together.

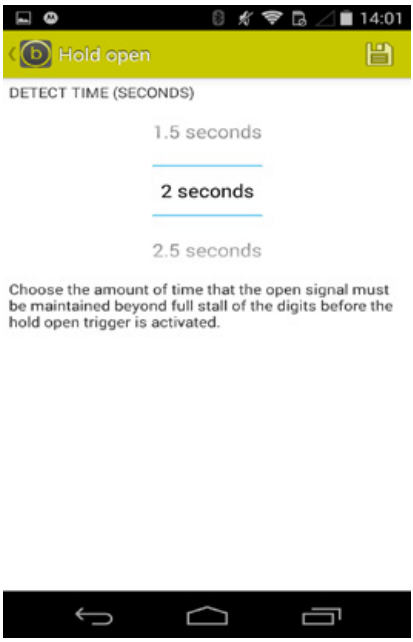


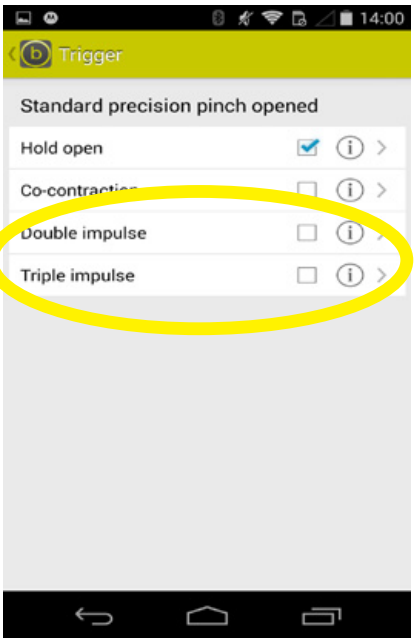
The second option “Features” has been configured to “other” for the device and cannot be changed. Disregard this.

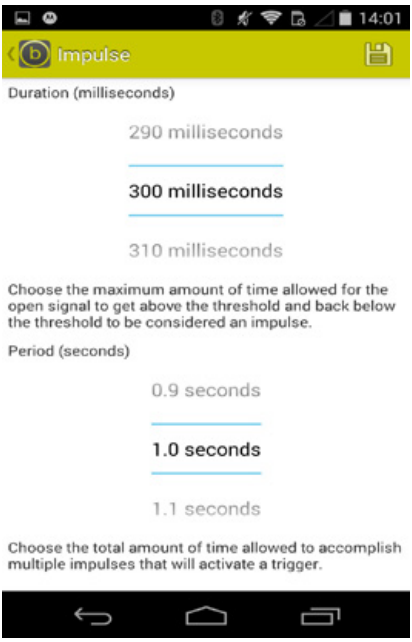
Assigning triggers

Tapping on a grip pattern will bring up a menu that allows you to assign one of the four possible triggers for activating it. You may also set detect time for “Hold open” and “Co-contraction” as well as duration and period times for “Double Impulse” and “Triple Impulse.”



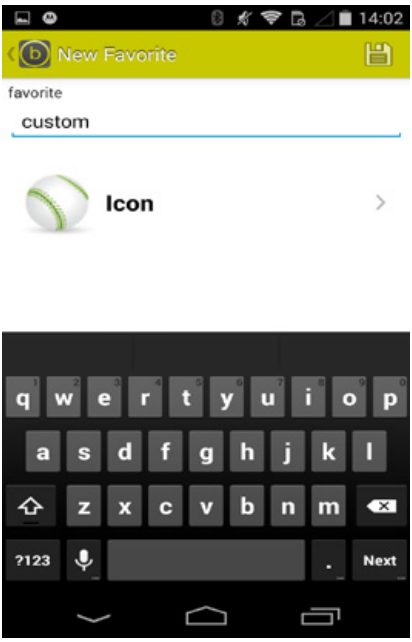

14:01
Hold open
DETECT TIME (SECONDS)
1.5 seconds
2 seconds
2.5 seconds
Choose the amount of time that the open signal must be maintained beyond full stall of the digits before the hold open trigger is activated.



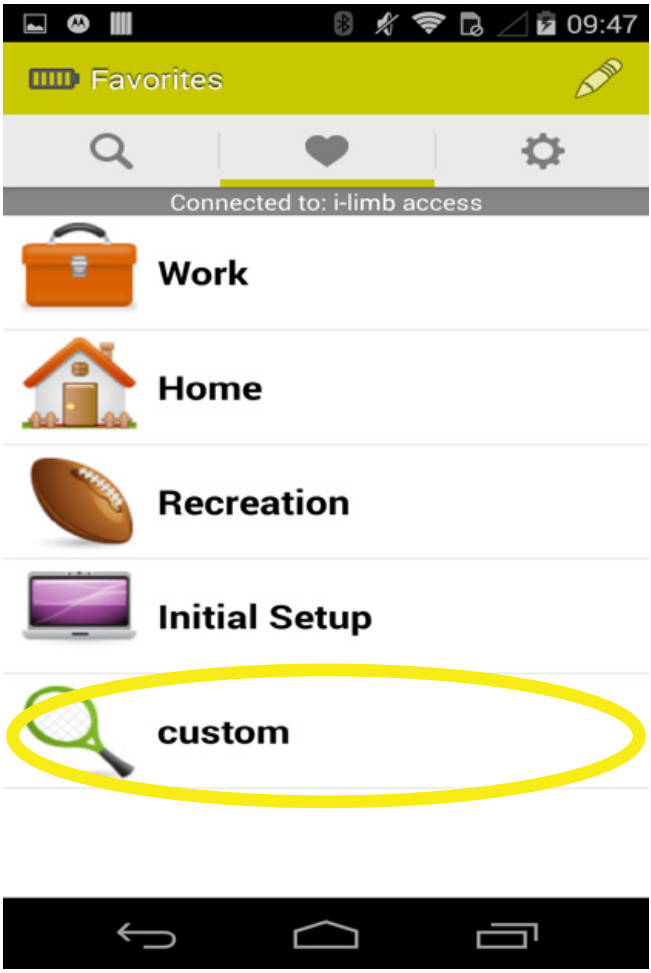

14:01
Impulse
Duration (milliseconds)
290 milliseconds
300 milliseconds
310 milliseconds
Choose the maximum amount of time allowed for the open signal to get above the threshold and back below the threshold to be considered an impulse.
Period (seconds)
0.9 seconds
1.0 seconds
1.1 seconds
Choose the total amount of time allowed to accomplish multiple impulses that will activate a trigger.

Once you have selected a group of grip patterns and triggers that you would like to be able to access as a single group of favorites, tap on the “+” icon in the top right of the Features screen. A screen will appear that allows you to choose a name and icon.

Note: A red symbol designating the assigned trigger will appear at the top right of the grip pattern(s).

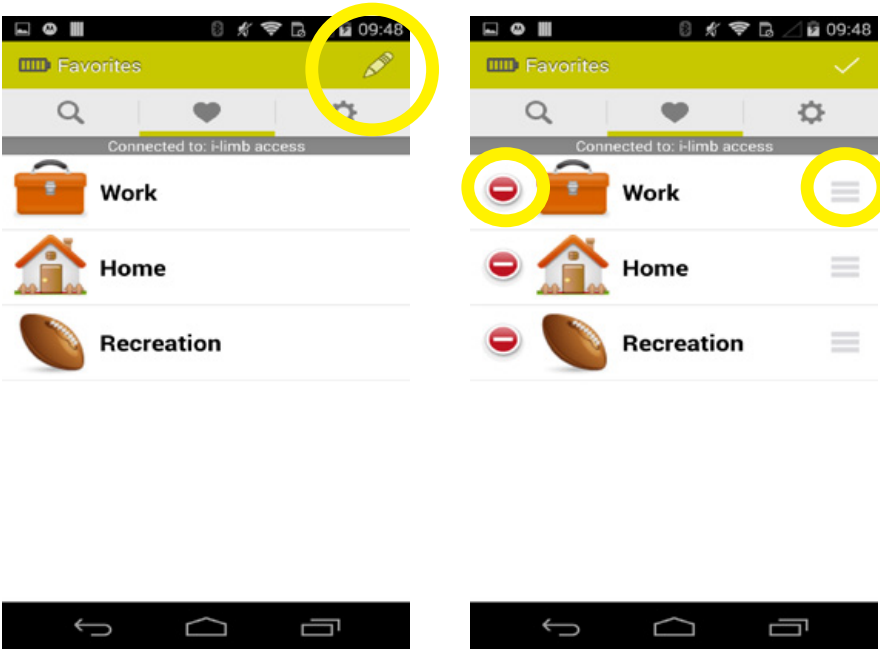


After you tap “Save” this favorite will now be added to your list on the “Favorites” screen of the biosim app and can be activated in the future with a single tap.

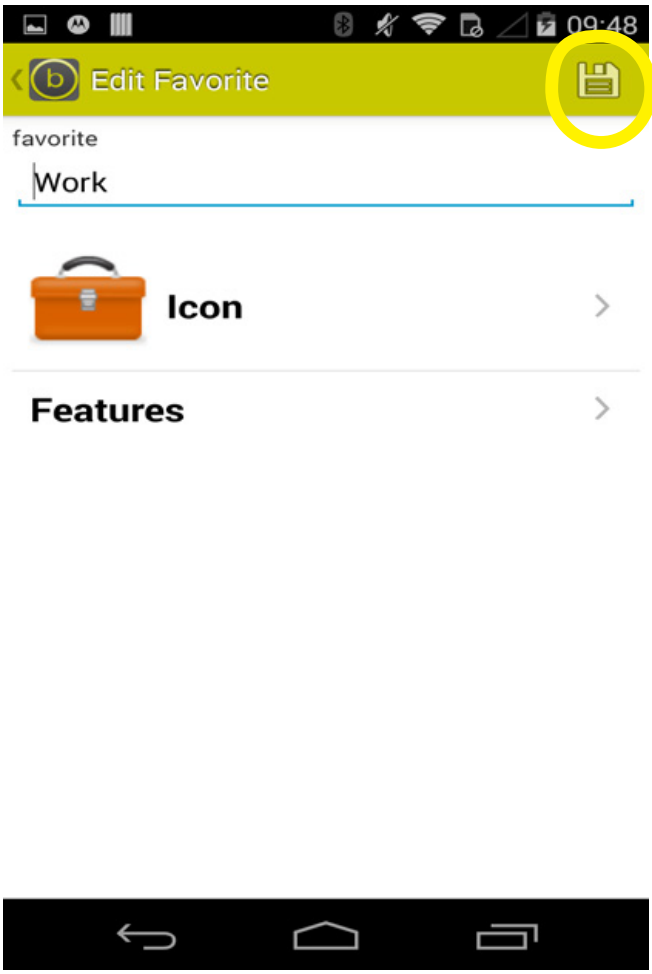


Editing favorites

Tap the edit button at the top right and the screen changes to look like the one seen below. Here, you can tap the red button to delete the favorite, grab the handles and drag to change the order of the list, and tap the name of the entry to edit the favorite.



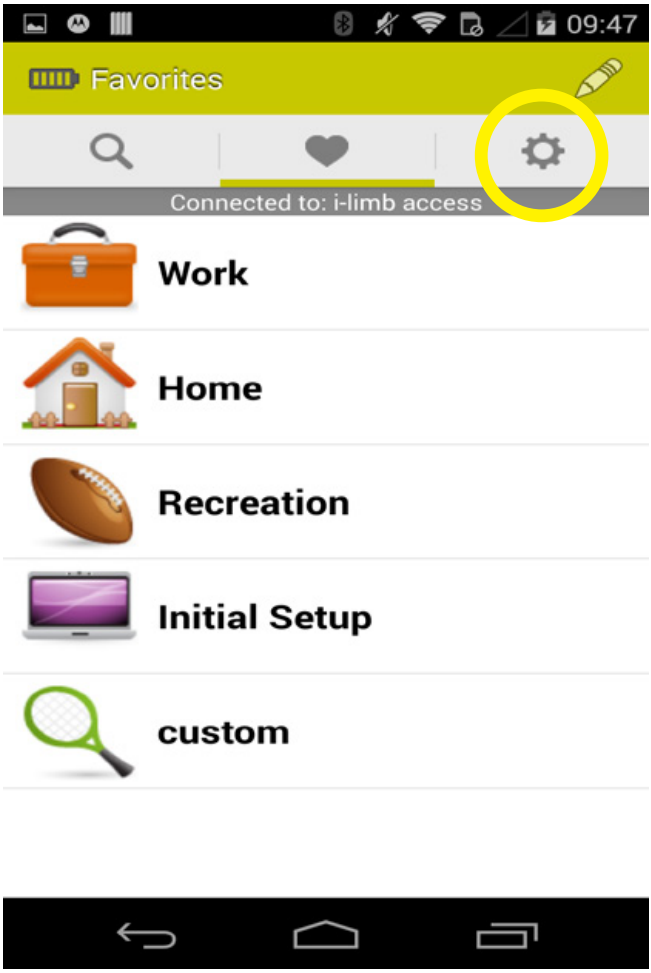
To edit any of your favorites, simply go into the favorite you would like change. Here you can modify the name, icon, grip pattern features, and triggers.



When editing features, you must return to the “Edit Favorite” screen above and tap “save” to confirm your changes.

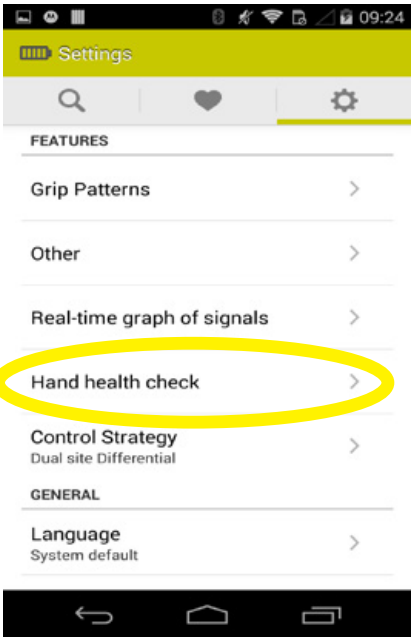
Settings

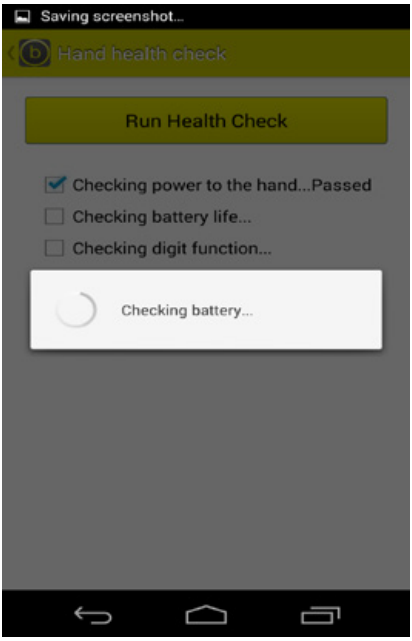
To access the “Settings” menu, tap the settings icon on the top right of the “Favorites” page.

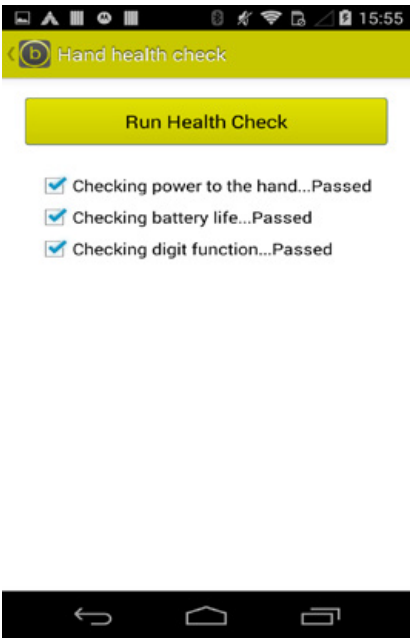


Hand health check

Selecting “hand health check” from the “Settings” menu brings up the option to run a test on your device to ensure that everything is running as it should. Tapping “Run health check” will run through a series of checks and will alert Touch Bionics to contact you if anything requires attention on your patient‘s i-limb device.







Note: You must be connected to the Internet using Wi-Fi or cellular to run a hand health check.

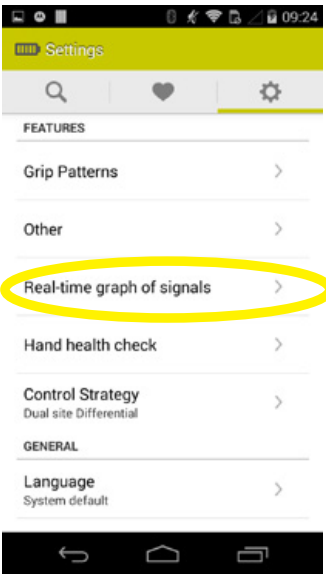
Real time graph

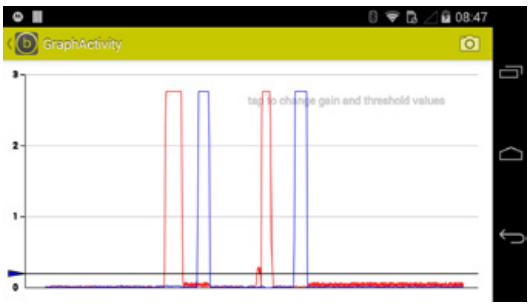
Selecting the “Real-time graph of signals” option from the “Settings” menu brings up a graph showing the patient‘s input signals on the screen. This visual information can be helpful when trying to activate certain triggers or work on controlling activation and relaxation of signals

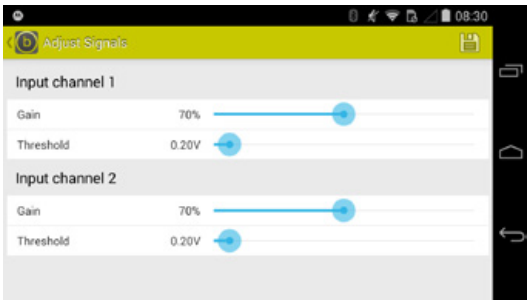
Turn the Android device horizontally to view the graph.

Tap the graph to adjust the gain and threshold settings.

You can save an image of the Real-time Graph by tapping the camera on the top right of the screen. “Saved” indicates that an image was successfully captured.



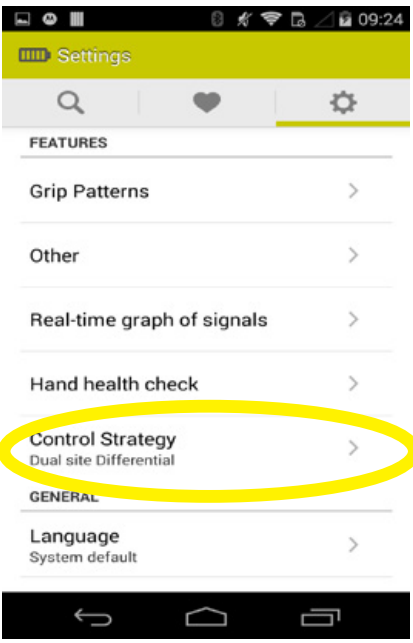


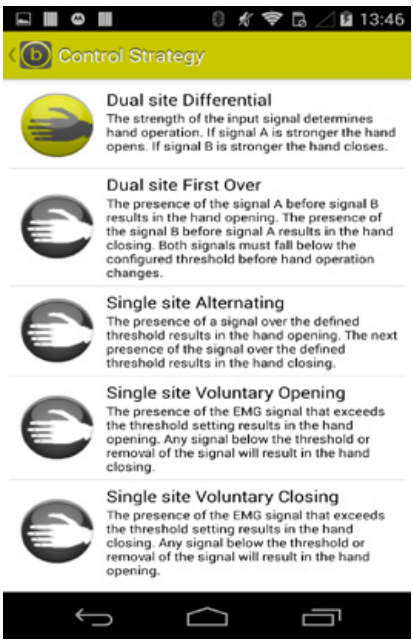


To exit the graph, simply turn the Android device back to a vertical position or tap “Done”.

Control strategy

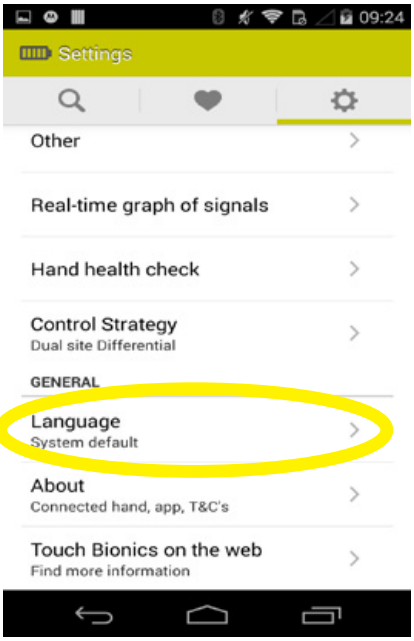
Control strategy is the method by which the i-limb device responds to the input signals. This option allows the clinician to switch how the device responds according to 5 options.

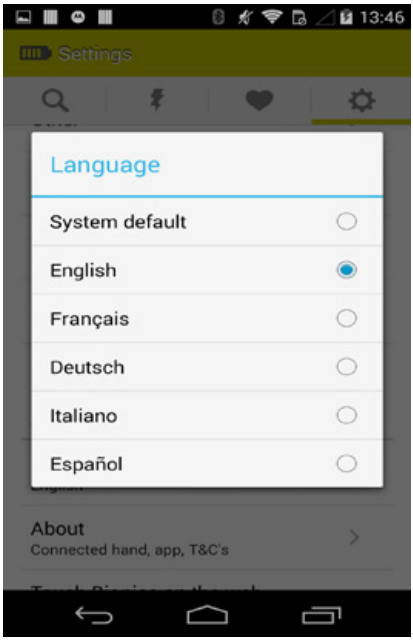



13:46
Control Strategy
Dual site Differential
The strength of the input signal determines hand operation. If signal A is stronger the hand opens. If signal B is stronger the hand closes.
Dual site First Over
The presence of the signal A before signal B results in the hand opening. The presence of the signal B before signal A results in the hand closing. Both signals must fall below the configured threshold before hand operation changes.
Single site Alternating
The presence of a signal over the defined threshold results in the hand opening. The next presence of the signal over the defined threshold results in the hand closing.
Single site Voluntary Opening
The presence of the EMG signal that exceeds the threshold setting results in the hand opening. Any signal below the threshold or removal of the signal will result in the hand closing.
Single site Voluntary Closing
The presence of the EMG signal that exceeds the threshold setting results in the hand closing. Any signal below the threshold or removal of the signal will result in the hand opening.

Languages

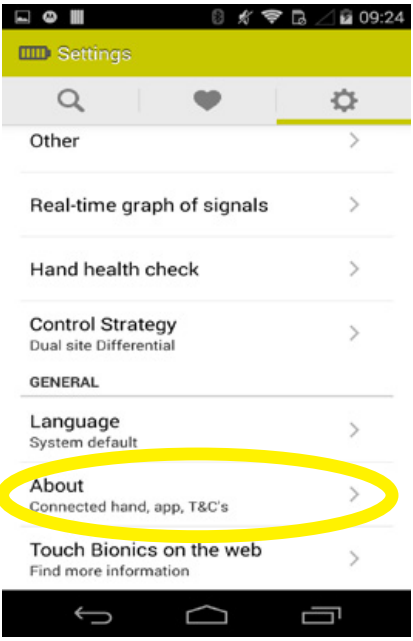
The default language setting is English. Select “Language” to change the settings to the appropriate language.

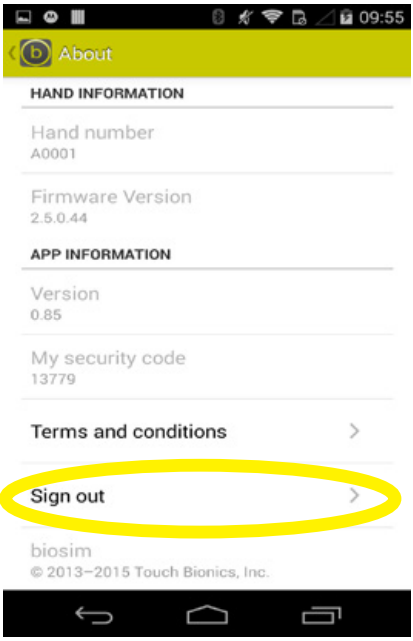




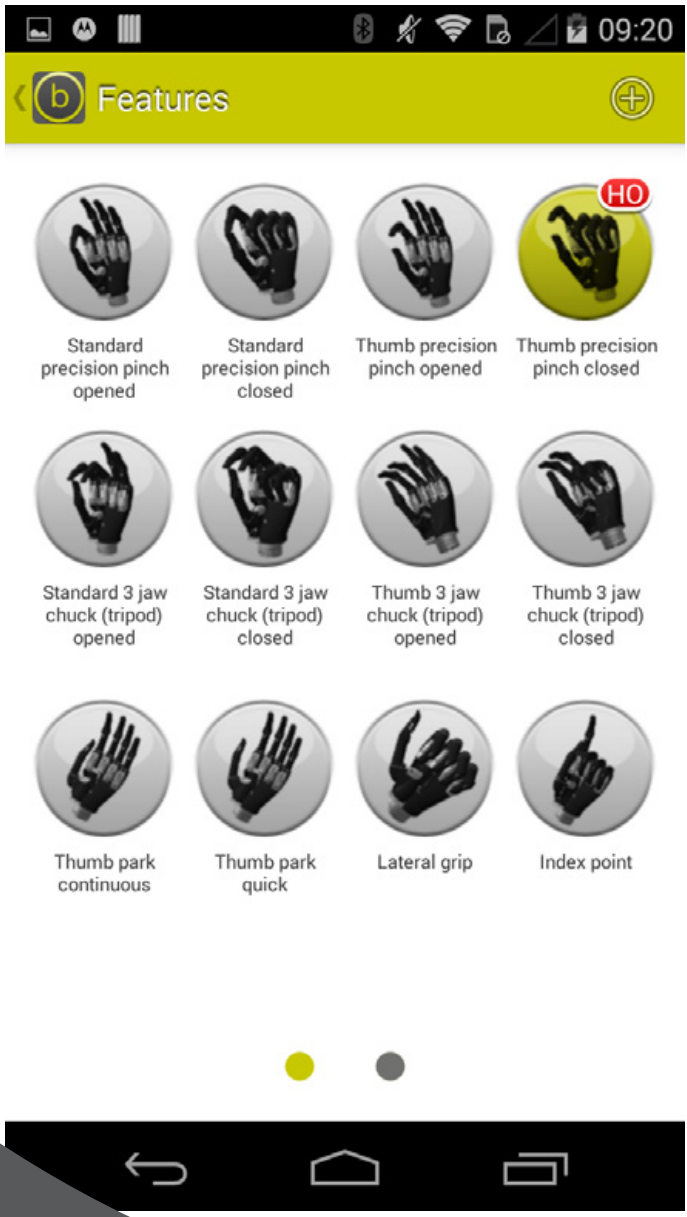
About

The final option on the “Settings” menu is the “About” option. Tapping this brings up a screen displaying information about the patient‘s prosthesis and the application. The unique security code will also be found here.





Tapping “Sign out” will end the session and require you to sign in again for your next session. For easy access, we recommend you remain signed in.



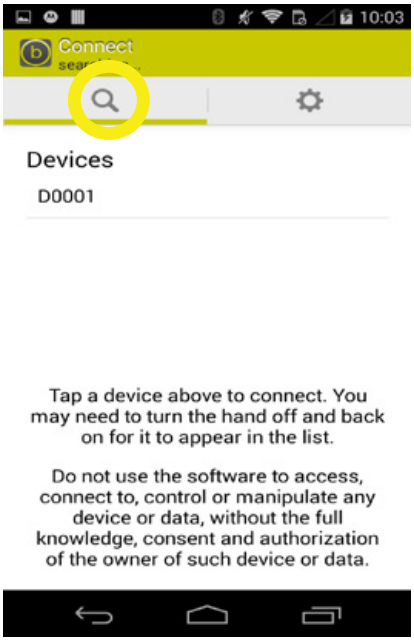
biosim™ App: Android

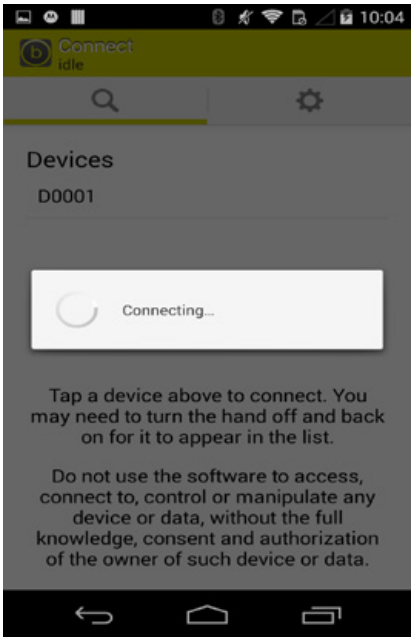
i-limb™ digits

touch bionics

Connection

After signing in, you will be brought to the connection screen where you will tap the device to which you want to connect.


10:03
Connect
Devices
D0001
Tap a device above to connect. You may need to turn the hand off and back on for it to appear in the list.
Do not use the software to access, connect to, control or manipulate any device or data, without the full knowledge, consent and authorization of the owner of such device or data.


10:04
Connect
idle
Devices
D0001
Connecting...
Tap a device above to connect. You may need to turn the hand off and back on for it to appear in the list.
Do not use the software to access, connect to, control or manipulate any device or data, without the full knowledge, consent and authorization of the owner of such device or data.

Searching for another device

If you need to connect to a different device, simply tap the magnifying glass in the top left corner of the app and it will search for any devices in the area.

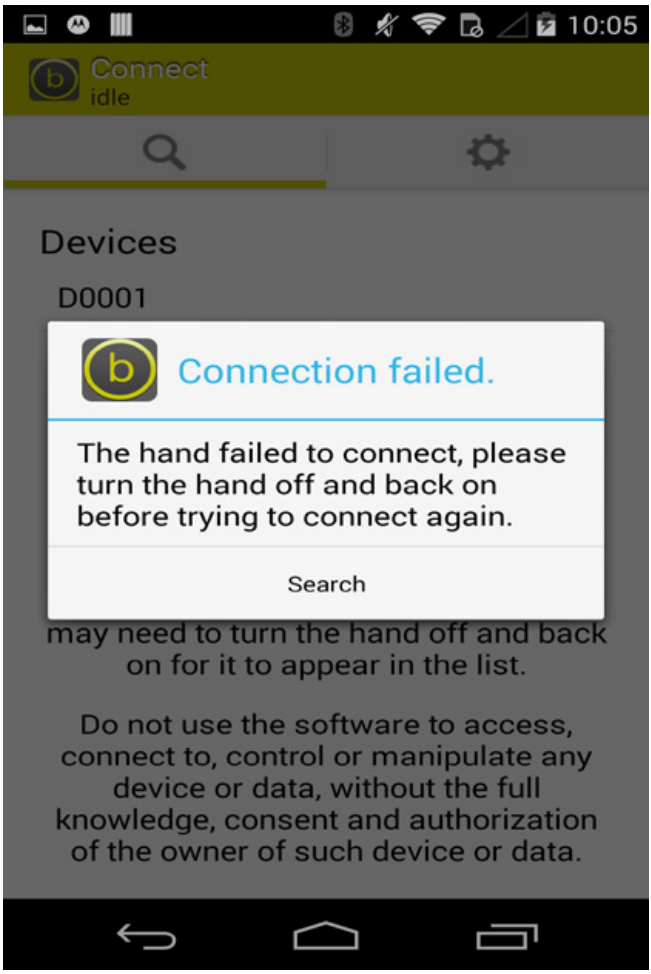
Authorized User Access

In order for you to connect to a patient's device, they will need to tell you their 4 digit serial number located under the battery on the wristband. You will be prompted to enter this after selecting the patient's device.

Note: If you do not have a wristband you can locate the device serial number in biosim.

Connection failed

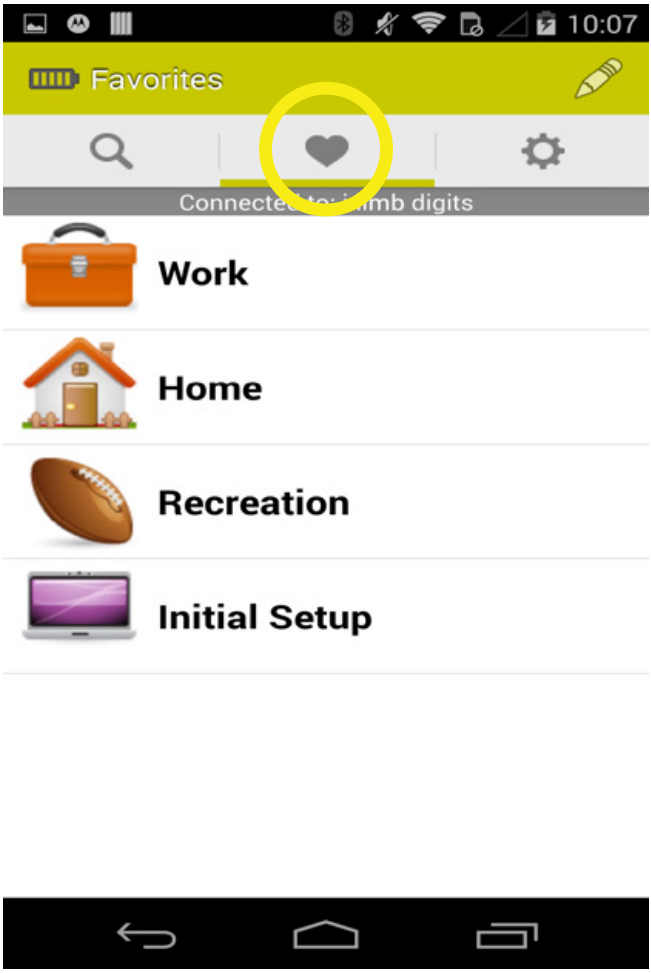
If the digits device should fail to connect to the app due to loss of power, proximity with the Android device, or other reasons, the following screen will appear:


10:05
Connect
idle
Devices
D0001
Connection failed.
The hand failed to connect, please turn the hand off and back on before trying to connect again.
Search
may need to turn the hand off and back on for it to appear in the list.
Do not use the software to access, connect to, control or manipulate any device or data, without the full knowledge, consent and authorization of the owner of such device or data.

In this instance, turn off the device for 4 seconds, then turn back on. Tap the “Search” button to reconnect.

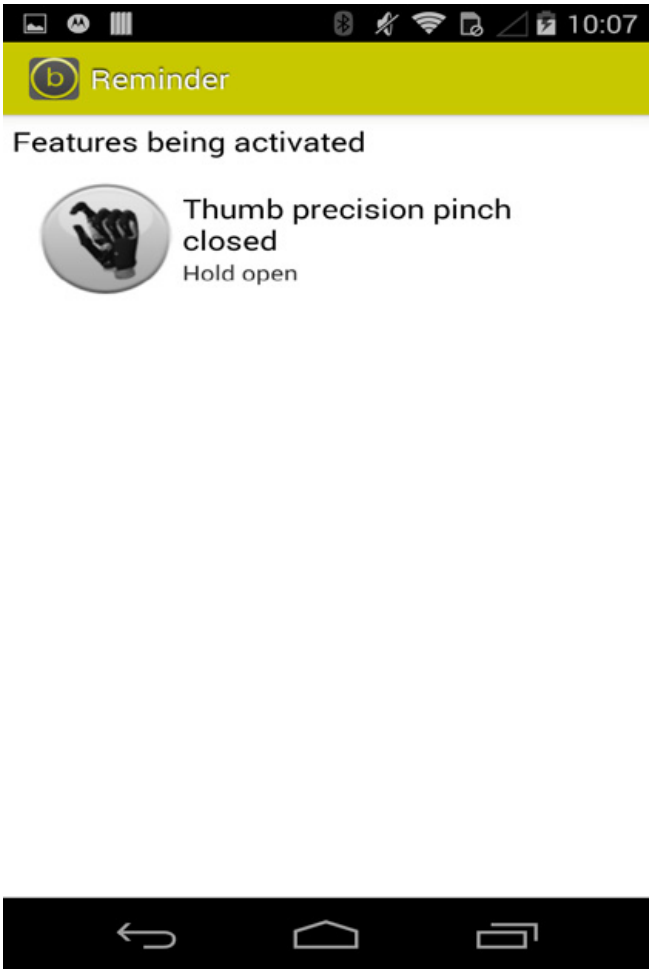
Favorites screen

Here you can assign groups of grip patterns and triggers a single name to make them easily accessible with a single tap.



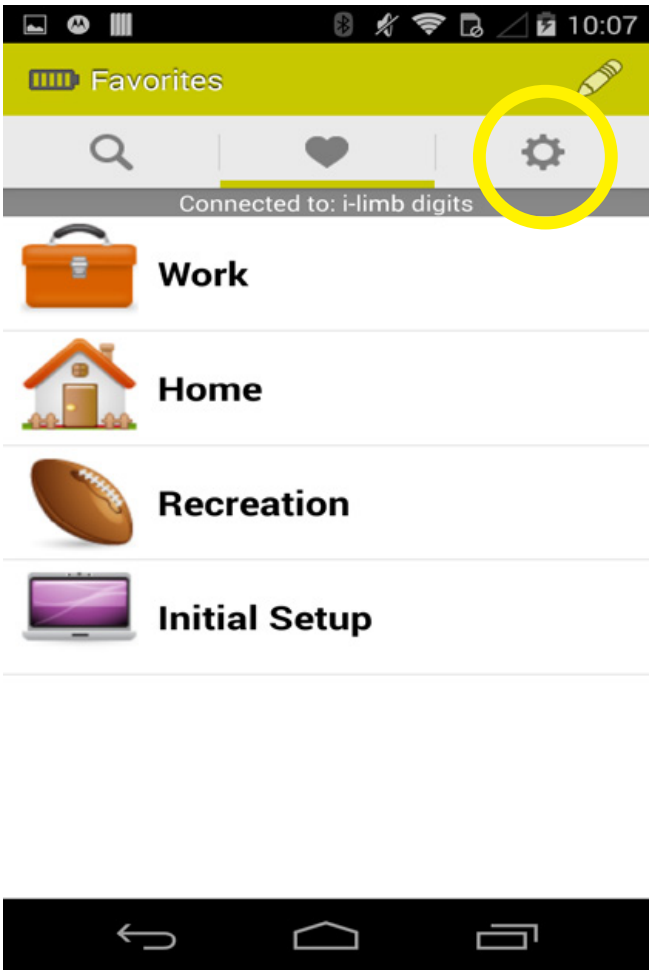
Note: To access the Favorites screen at any time, simply tap the “heart” icon.

Tapping on the favorite will instantly activate those settings on the device and display a quick reminder of what grip patterns and triggers are included.

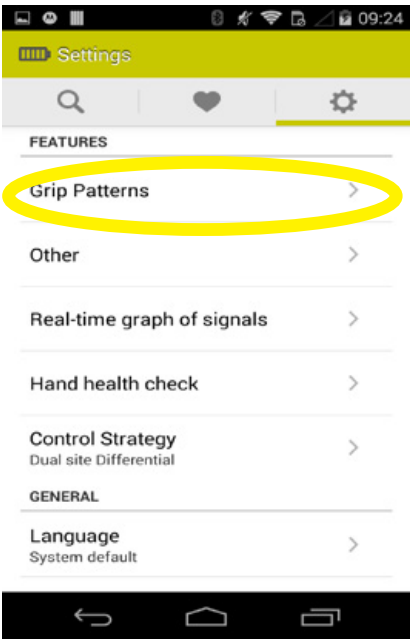


Creating a new favorite

Everyone has their own set of features and triggers that they prefer to use for different tasks. To set up a group of features, tap the settings icon in the top right corner.

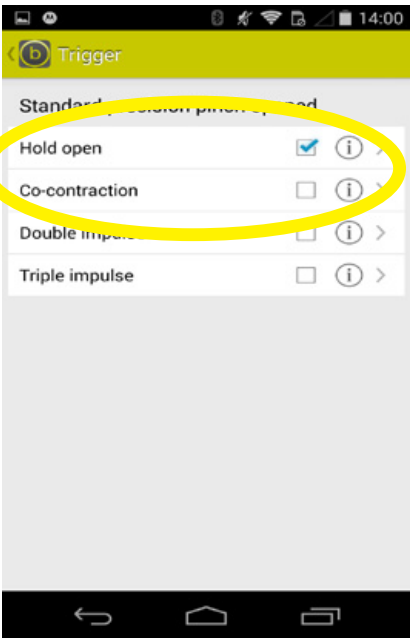


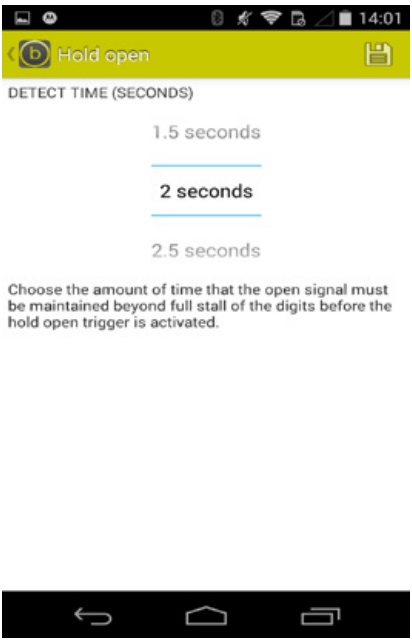
On the “Settings” menu, tap “Features – Grip patterns” to access the full set of grips available for selection. Exactly the same as biosim on your computer, from this screen you can choose the features that you would like to group.

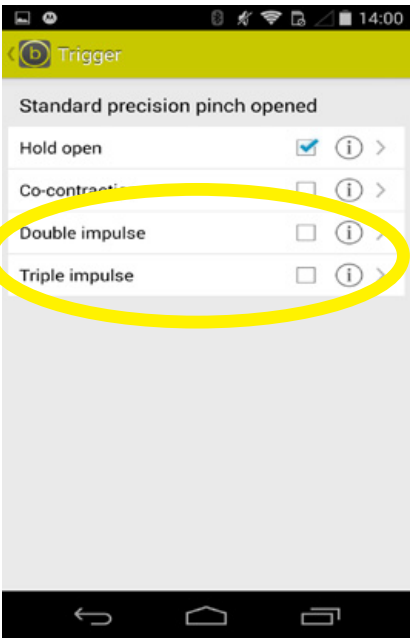


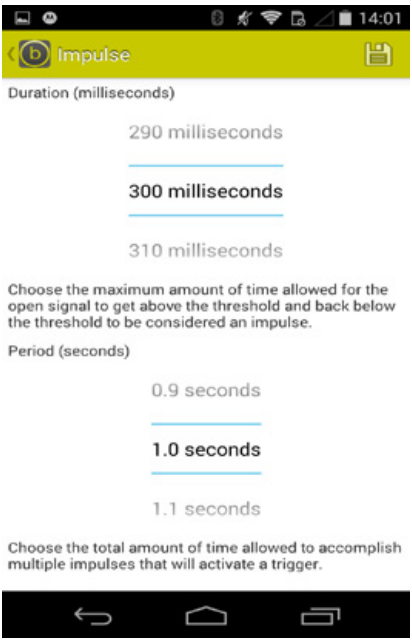
Assigning triggers

Tapping on a grip pattern will bring up a menu that allows you to assign one of the four possible triggers for activating it. You may also set detect time for “Hold open” and “Co-contraction” as well as duration and period times for “Double Impulse” and “Triple Impulse”.

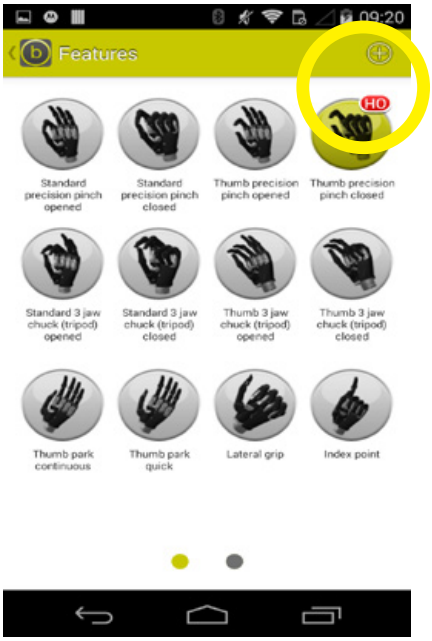



14:01
Hold open
DETECT TIME (SECONDS)
1.5 seconds
2 seconds
2.5 seconds
Choose the amount of time that the open signal must be maintained beyond full stall of the digits before the hold open trigger is activated.

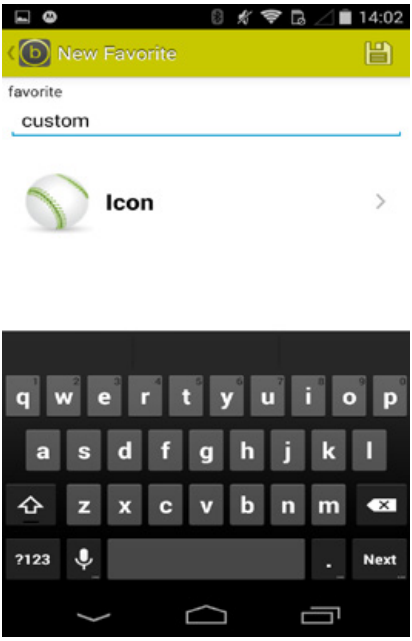



14:01
Impulse
Duration (milliseconds)
290 milliseconds
300 milliseconds
310 milliseconds
Choose the maximum amount of time allowed for the open signal to get above the threshold and back below the threshold to be considered an impulse.
Period (seconds)
0.9 seconds
1.0 seconds
1.1 seconds
Choose the total amount of time allowed to accomplish multiple impulses that will activate a trigger.

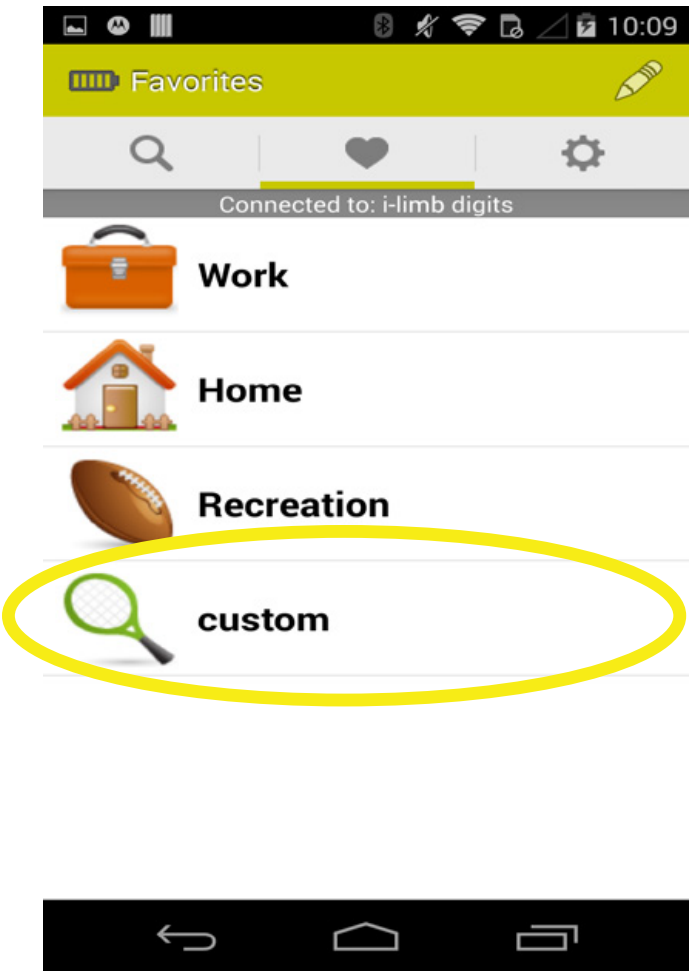
Once you have selected a group of grip patterns and triggers that you would like to be able to access as a single group of favorites, tap on the “+” icon in the top right of the Features screen. A screen will appear that allows you to choose a name and icon.



Note: A red symbol designating the assigned trigger will appear at the top right of the grip pattern(s).

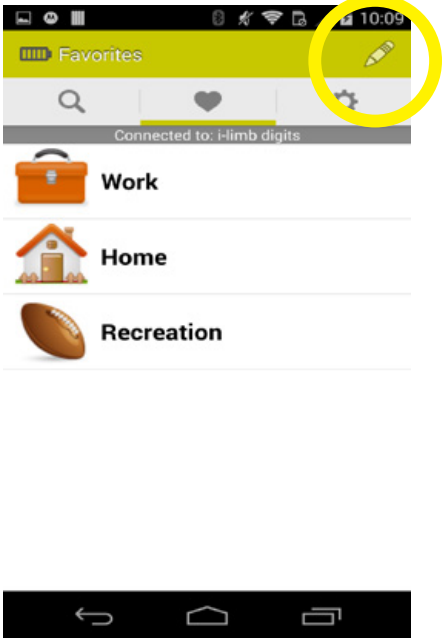


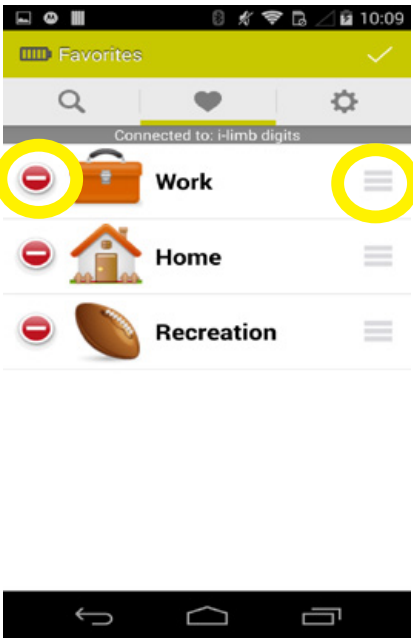
After you tap “Save” this favorite will now be added to your list on the “Favorites” screen of the biosim app and can be activated in the future with a single tap.



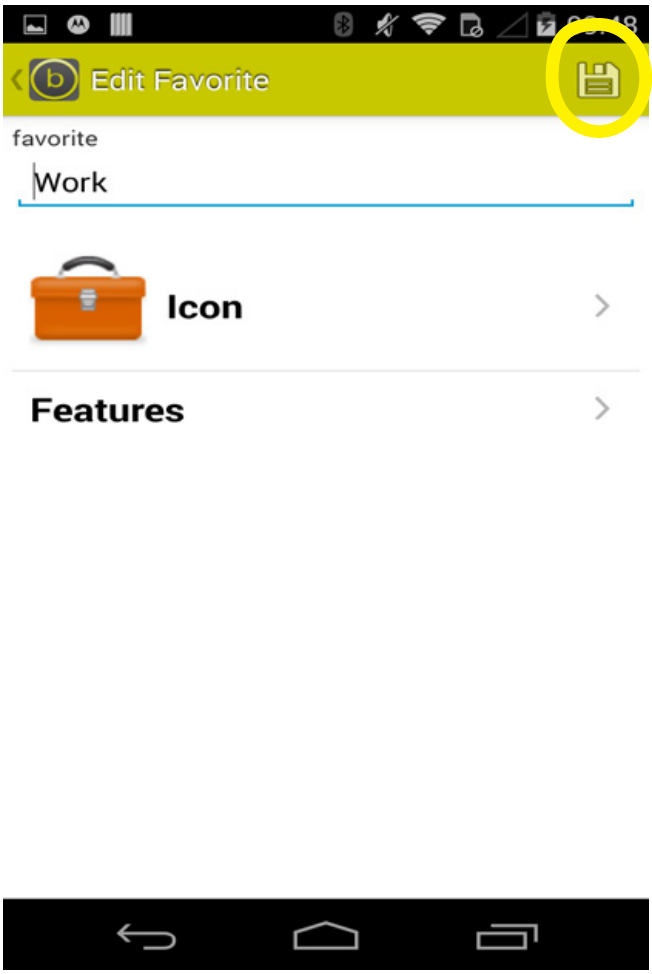
Editing favorites

Tap the edit button at the top right and the screen changes to look like the one seen below. Here, you can tap the red button to delete the favorite, grab the handles and drag to change the order of the list, and tap the name of the entry to edit the favorite.





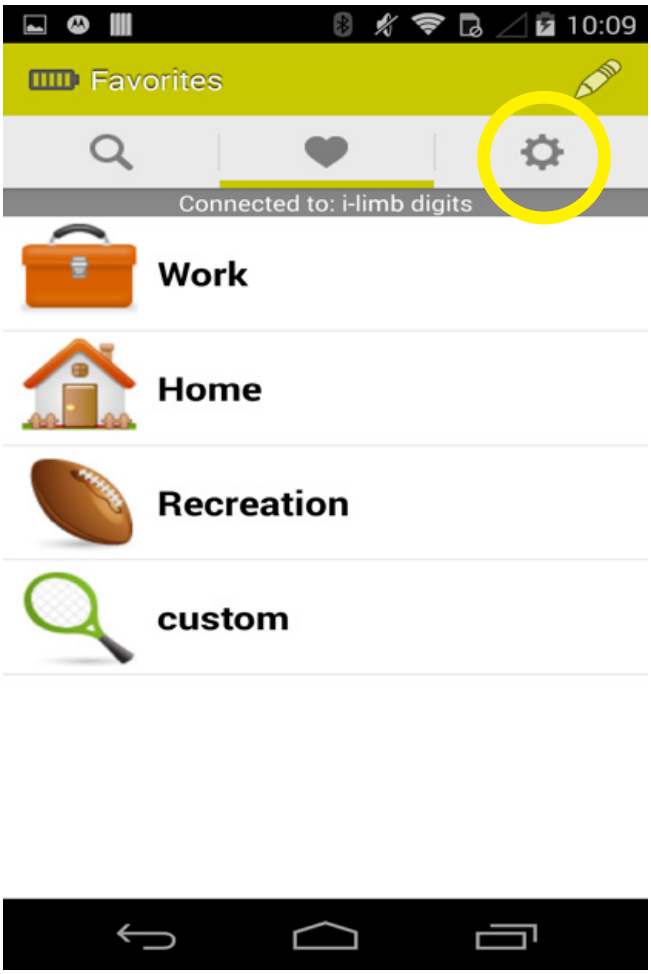
Here you can edit preferences of the selected favorite including the name, associated icon, and grip pattern association. Tap the individual field to edit.



When editing features, you must return to the “Edit Favorite” screen above and tap “save” to confirm your changes.

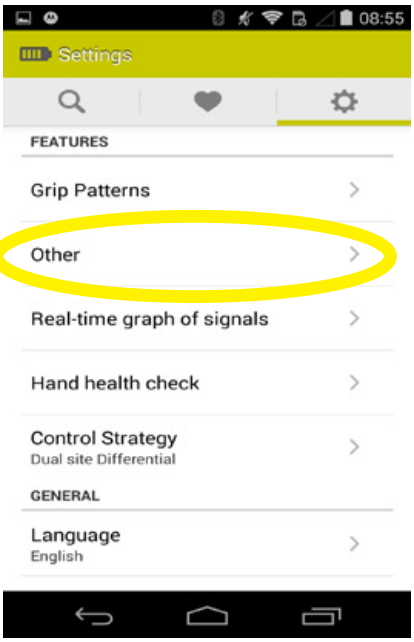
Settings

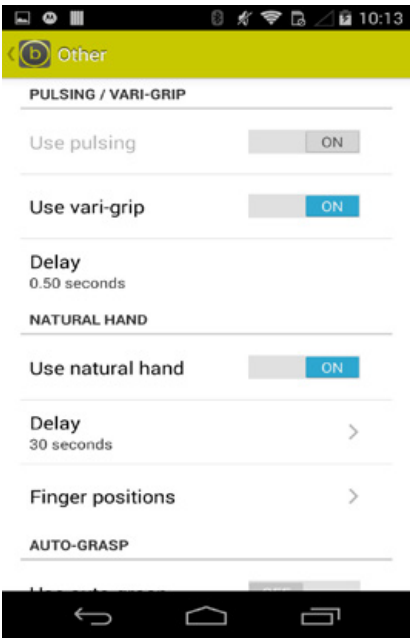
To access the “Settings” menu, tap the settings icon on the top right of the “Favorites” page.



Other features

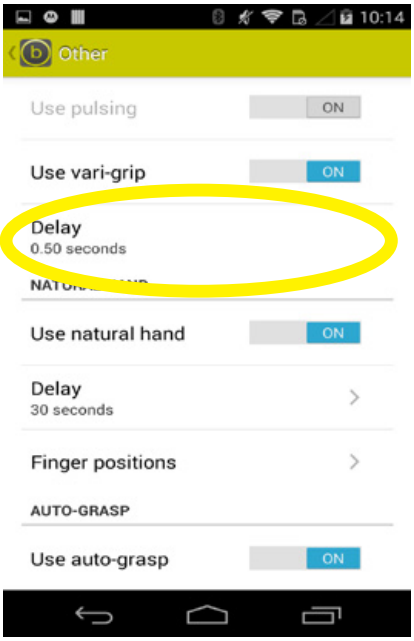
To access more features, back on the “Settings” menu, you can also select “Features-Other,” which will provide a new screen showing various options that can be turned “On or Off”.

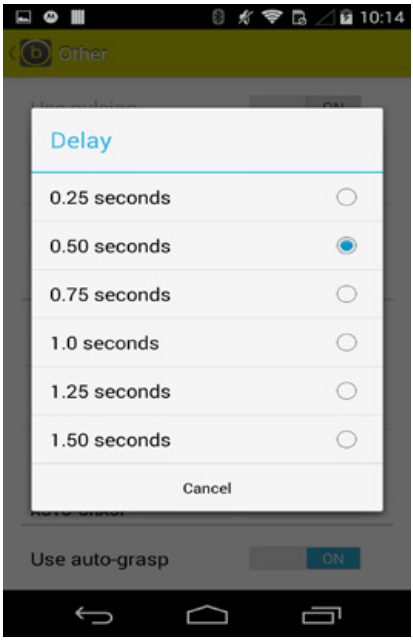




Other features

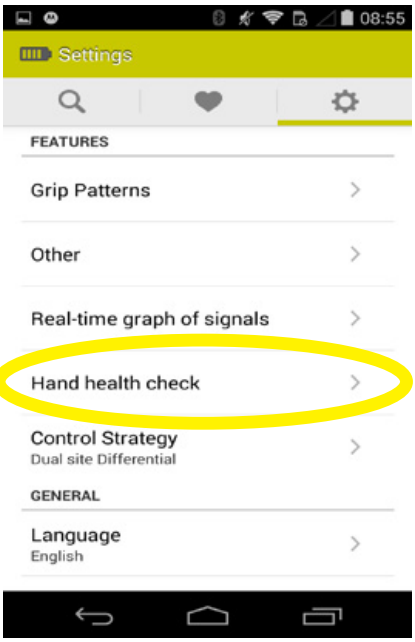
In addition to features that can be turned on or off, timing delay can be adjusted for vari-grip.

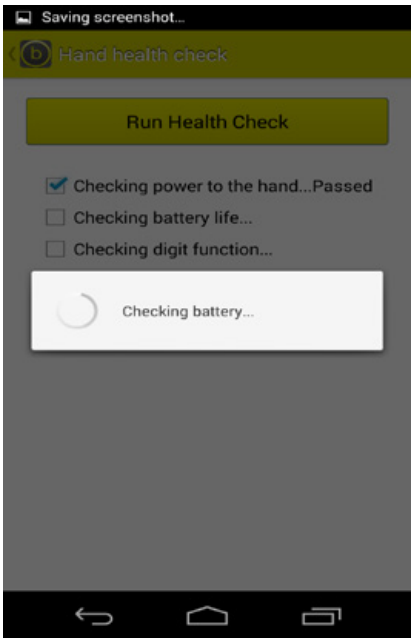


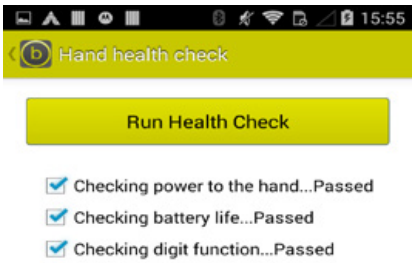


Hand health check

Selecting “hand health check” from the “Settings” menu brings up the option to run a test on your device to ensure that everything is running as it should. Tapping “Run health check” will run through a series of checks and will alert Touch Bionics to contact you if anything requires attention on your patient‘s i-limb device.







Note: You must be connected to the Internet using Wi-Fi or cellular to run a hand health check

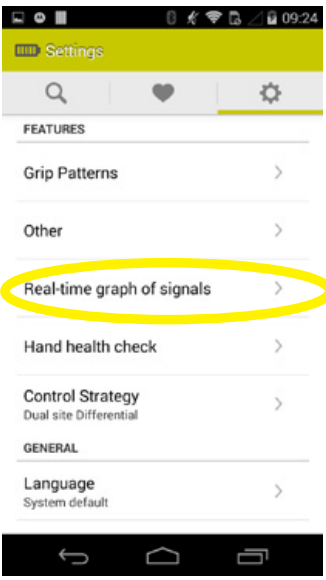
Real time graph

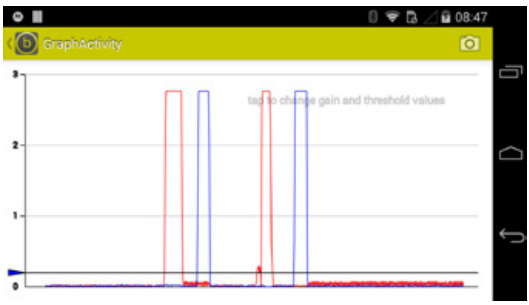
Selecting the “Real-time graph of signals” option from the “Settings” menu brings up a graph showing the patients input signals on the screen. This visual information can be helpful when trying to activate certain triggers or work on controlling activation and relaxation of signals

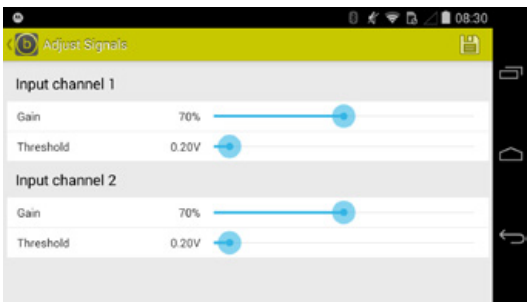
Turn the Android device horizontally to view the graph.

Tap the graph to adjust the gain and threshold settings.

You can save an image of the Real-time Graph by tapping the camera on the top right of the screen. ”Saved” indicates that an image was successfully captured.



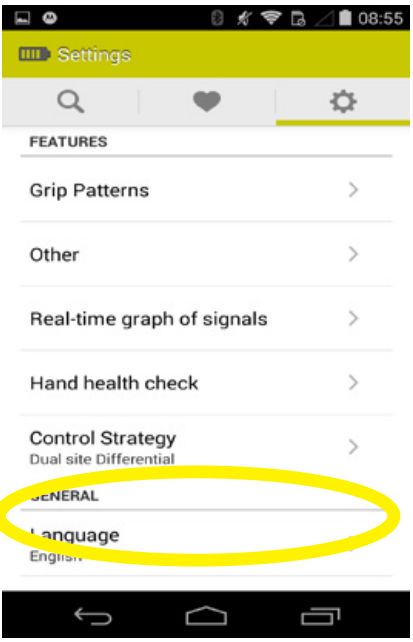


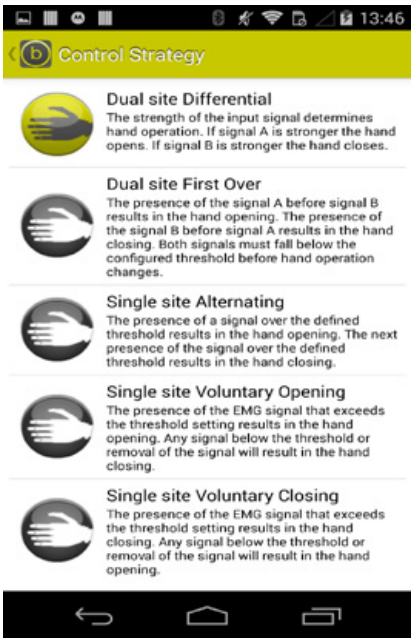


To exit the graph, simply turn the Android device back to a vertical position or tap “Done”.

Control strategy

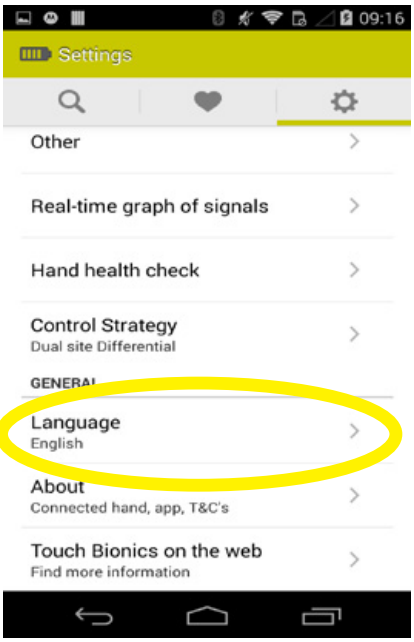
Control strategy is the method by which the i-limb device responds to the input signals. This option allows the clinician to switch how the device responds according to 5 options.

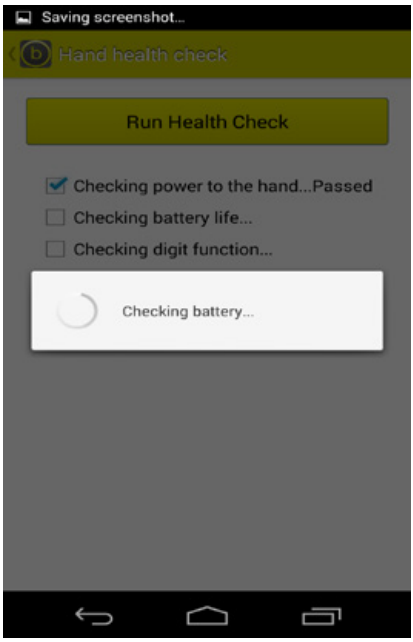



13:46
Control Strategy
Dual site Differential
The strength of the input signal determines hand operation. If signal A is stronger the hand opens. If signal B is stronger the hand closes.
Dual site First Over
The presence of the signal A before signal B results in the hand opening. The presence of the signal B before signal A results in the hand closing. Both signals must fall below the configured threshold before hand operation changes.
Single site Alternating
The presence of a signal over the defined threshold results in the hand opening. The next presence of the signal over the defined threshold results in the hand closing.
Single site Voluntary Opening
The presence of the EMG signal that exceeds the threshold setting results in the hand opening. Any signal below the threshold or removal of the signal will result in the hand closing.
Single site Voluntary Closing
The presence of the EMG signal that exceeds the threshold setting results in the hand closing. Any signal below the threshold or removal of the signal will result in the hand opening.

Languages

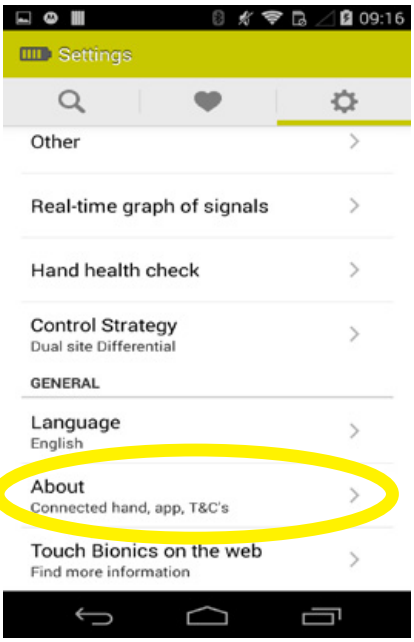
The default language setting is English. Select “Language” to change the settings to the appropriate language.

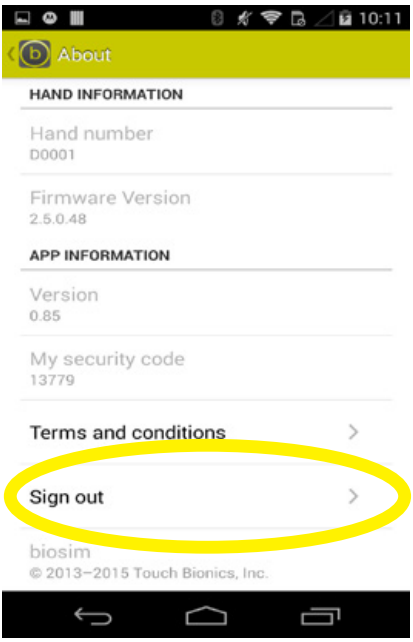




About

The final option on the “Settings” menu is the “About” option. Tapping this brings up a screen displaying information about the patient‘s prosthesis and the application. The unique security code will also be found here.





Tapping “Sign out” will end the session and require you to sign in again for your next session. For easy access, we recommend you remain signed in.

Health and safety

For health and safety information regarding i-limb devices, please refer to the respective user manuals that can be found at www.touchbionics.com/downloads/document-library/.

For health and safety information regarding your Android device, please refer to the product literature from Android.

Other important points

- Updates will be available through the Google Play Store. Check back regularly to ensure you are using the latest version of the biosim mobile app.

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Part number: MA01312, Issue No. 1, March 2015